



Dakota County Food Waste Reduction

Focus Group Report

M A Y 2 0 1 6

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Summary

The Dakota County Environmental Resources Department in partnership with MN GreenCorps is developing a food waste reduction education campaign based on the Environmental Protection Agency's "Food: Too Good to Waste Program." To gain insight on when, why, and how food gets wasted in Dakota County households, the Dakota County Environmental Resources Department contracted with Wilder Research to conduct three focus groups with Dakota County residents about food waste. The information gathered from the focus groups was used to shape a pilot program and county-wide educational campaign for Dakota County.

Wilder Research conducted three focus groups at three different Dakota County libraries in February 2016. Participants were primarily recruited using a randomized family-targeted sample of landlines and cell phones in Dakota County. Overall, 37 residents participated in the focus groups. Participants were asked about their experiences related to food waste, including their perceptions of challenges, benefits, and strategies for reducing food waste. In addition, focus group participants provided feedback on specific food waste reduction tools and contributed to the development of slogans for the county's initiative. Notes on the focus group discussions were taken and analyzed for themes by Wilder Research.

Key themes and findings

Motivating factors and challenges for food waste reduction

- People are frustrated with, and feel guilty about, food waste and the associated money wasted.
- A busy lifestyle, poor planning and cooking execution, having finicky children, and buying in bulk (buying larger quantities for a lower per-unit price) are main barriers to eliminating food waste.
- Expiration dates were a major area of confusion and there is a strong need for clarification on what they mean.
- Saving money is the most motivating benefit for people to reduce food waste. Reducing trash and minimizing resource waste are also important motivating factors.

Strategies for reducing food waste residents currently use or want to know more about

- Proper food storage and meal planning were the main strategies for reducing food waste and the areas where people want the most help.
- Other strategies included preserving food when you have too much to consume before it goes bad, changing buying habits to buy smaller quantities and shop more often, sharing or donating extra food, and creatively cooking and using leftovers.

Tools and information dissemination

- Participants want grocery stores to be involved in disseminating information and being accountable for reducing food waste.
- Apps were frequently mentioned as tools that people would like to use to assist with a variety of food waste reduction strategies, including meal planning, managing shopping lists and kitchen inventories, and proper food storage.
- With regard to specific tools, participants generally felt that the Eureka Recycling Meal Planner was more useful than the “Food: Too Good to Waste” Shopping List.
- Most participants thought the Eat First stickers were impractical as designed, but said they would use smaller versions of the stickers.
- Both the A-Z and King County storage guides seemed very useful and helpful for people, although there was a slight preference for the King County guide due to its concise format.
- “Got a lot? Don’t let it Rot!” was the most popular slogan developed in the focus groups.

Key recommendations

- Clarify the meaning of expiration dates and incorporate this into educational materials.
- In promoting food waste reduction, emphasize the benefits of saving money, reducing trash, and lowering resource use.
- Focus on sharing proper food storage techniques in educational materials.
- Encourage and provide tools for meal planning.
- Get grocery stores involved in the educational campaign.

- Develop or identify and promote apps for shopping, meal planning, and food storage information.
- Use the Eureka Recycling Meal Planner tool, potentially with some modifications, but not the “Food: Too Good to Waste” Shopping List.
- Create smaller versions of the Eat First sticker.
- Have both storage guides available. Consider creating a magnet with the King County storage guide and binding or putting a ring through the A-Z guide, and have resources available in both print and web formats.

Background

Introduction

It is estimated that 40 percent of all the food grown in America ends up in the garbage. The typical American throws away 25 percent of the food they buy, about 245 pounds a year! For the average family of four, that adds up to somewhere between \$1,365 and \$2,275 every year (Gunders, 2012). While we do not buy food intending to throw it away, that is often what happens. Food waste is the single largest material not collected for diversion in U.S. municipal solid waste. In fact, food waste accounts for 18 percent of all the garbage thrown away in the Twin Cities metro area (Burns & McDonnell Engineering Company, Inc., 2013). In Dakota County, household trash usually ends up in a landfill where food rots and produces methane, a greenhouse gas that is more than 20 times as potent as carbon dioxide (Gunders, 2012).

Edible food is not the only thing wasted when we fail to eat food and throw it away instead. There are numerous resources used in food production and distribution as well: water and pesticides used to grow the food, gasoline used to power the tractors and ship the food to markets, refrigeration used in trucks and in the grocery store to keep it from spoiling, and all the human labor used along the way to produce food. It is estimated that 10 percent of the total U.S. energy budget, 50 percent of arable land, and 80 percent of freshwater consumption is used to grow food (Gunders, 2012).

The good thing about food waste is that each of us has the power to change this. By making small changes to how we shop, cook, and store food, we can prolong its shelf life and get the value out of the food we buy.

The Dakota County Environmental Resources Department is responsible for, and committed to, improving waste management in the community. In conjunction with Minnesota GreenCorps, they are working to pilot the Environmental Protection Agency's "Food: Too Good to Waste" program, and working on the creation of a food waste reduction education campaign. The program teaches residents to become aware of and reduce the amount of food they waste with simple behavior changes and tips. Dakota County plans to roll out the pilot program in April 2016 and a county-wide education program later in the year through 2017.

To help shape the education program for Dakota County residents, Dakota County contracted with Wilder Research in December 2015 to conduct three focus groups with Dakota County residents. The aim of the focus groups was to gain insight on residents' perceptions of food waste and potential barriers and opportunities to reduce food waste at home. The

focus group participants were also asked to provide feedback on educational tools presented by Dakota County, and assist in creating marketing slogans for the pilot project.

Methods

The three focus groups took place in February 2016 at various library locations across Dakota County. The library locations were spread out across the county to give access to residents in different cities and included Robert Trail Library in Rosemount, Burnhaven Library in Burnsville, and Wescott Library in Eagan.

To recruit participants for the focus groups, Wilder used a randomized family-targeted sample of landlines and cell phones in Dakota County that was purchased from a national sampling vendor, Marketing Systems Group. The sample was targeted to include people likely to have children in their household based on information such as magazine subscriptions. Fliers were also posted in libraries around the county. See Appendix A for more details about recruitment methods.

Overall, 37 people participated in the focus groups (7 at Robert Trail, 15 at both Burnhaven and Wescott). All focus groups took place in the evening with light refreshments provided. Each focus group participant was given a \$25 Target gift card, as well as a box of PEAKfreshUSA produce bags, intended to keep produce fresh longer, so participants left with a tangible tool to start reducing their food waste.

Each hour and a half focus group began with a brief welcome and introductions, followed by several warm-up questions to get participants comfortable talking about food waste. Then we discussed challenges, benefits, and strategies to reducing food waste. Participants were asked to vote on the benefits that most resonated with them. We also showed them five different tools aimed at reducing food waste that were provided by Dakota County and asked for their feedback. Finally, we had an exercise in developing slogans that would capture the attention of Dakota County residents and build on themes discussed throughout the evening. Participants also voted on their favorite slogans.

Notes were taken on the focus group discussions by Wilder Research and analyzed for themes that arose.

Focus groups, by nature, rely on very small sample sizes, and their results therefore cannot be guaranteed to fully represent the overall population. In offering a financial incentive to participate in the focus groups, Dakota County aimed to encourage participation by all residents, including those not particularly motivated by the topic of food waste. Nonetheless, as noted below, the demographic characteristics of the focus group population differed somewhat from those of the Dakota County population as a

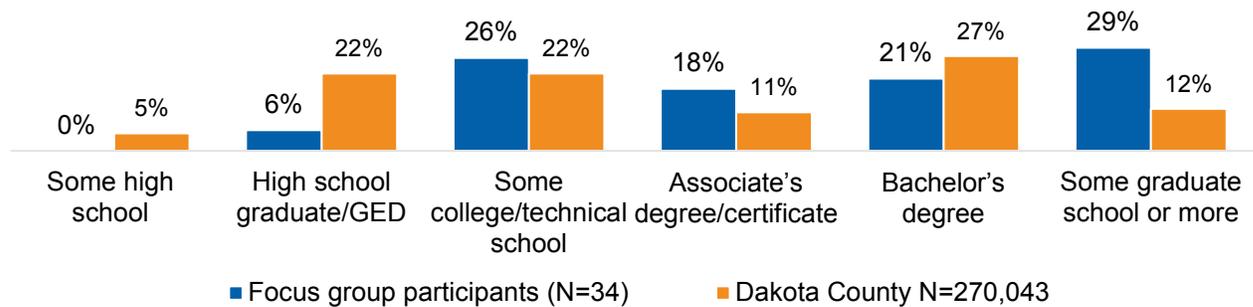
whole. The population recruited for the focus groups would likely better represent the perspectives of those residents who have an interest in a food waste reduction, and the focus groups yielded a great deal of useful information to guide Dakota County in the development of their food waste reduction program.

Participant demographics

Participants were asked to complete a survey at the end of the focus group that included participant demographics. All participants filled out the survey, but were not required to answer all questions.

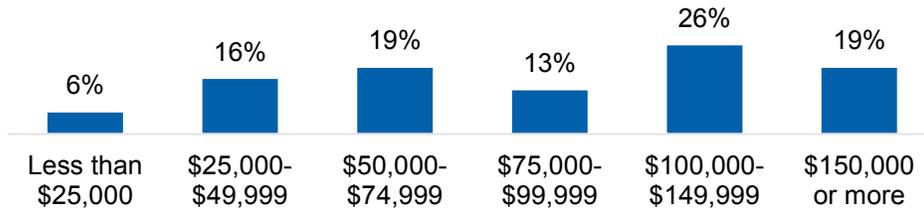
Seventy-three percent of participants were female and 100 percent of participants identified as white. Both of these percentages were higher than the actual percentages of those in Dakota County (51% female, 84% white alone), according to 2010-2014 American Community Survey 5-Year Estimates (U.S. Census Bureau, 2014). All participants were at least high school graduates or had received a GED (vs. 95% in Dakota County), and half had a bachelor’s degree or higher (vs. 40% in Dakota County) (Figure 1). The median household income in Dakota County is \$74,995; 58 percent of participating households in the focus group reported an annual income of \$75,000 or more (Figure 2).

1. Education of participants



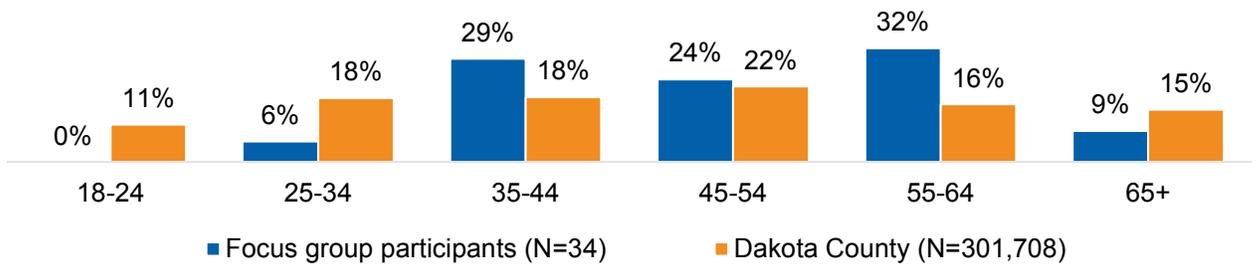
Note: American Community Survey data is only for adults age 25 and over.

2. Income of participants (N=31)



Fifty-three percent of participants had children living in their household compared to only 36 percent in Dakota County, indicating that our family targeting was successful. Sixty-four percent of participants were married (vs. 60% in Dakota County over the age of 18). Most participants were in the 35-64 age range, which were more highly represented than that of Dakota County (Figure 3). (U.S. Census Bureau, 2014)

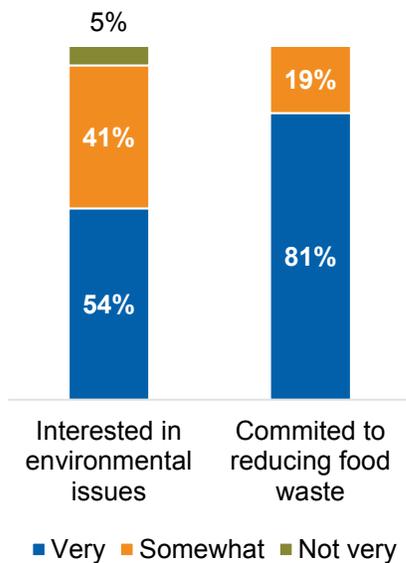
3. Age of participants (N=34)



Commitment to reducing food waste

After the focus groups, participants were asked in the post-survey how committed they were to reducing food waste. All respondents said they were at least “somewhat committed” to reducing food waste, and 81 percent said they were “very committed” (Figure 4). Participants were also asked about how interested they were in environmental issues in general. Again, almost all participants were at least “somewhat interested,” but just over half said they were “very interested.” Thus, there was a greater level of commitment to reducing food waste than there was general interest in environmental issues. There were some respondents who were less interested in environmental issues, but had a higher level of commitment to reducing food waste, indicating that reducing food waste might appeal to a broader audience.

4. Commitment to reducing food waste and interest in environmental issues (N=37)



Focus group findings

The following sections of this report outline themes that emerged from the focus groups.

Thoughts on “food waste”

Initial thoughts

When asked about initial images or words that came to mind when they thought of food waste, most participants described foods that once were edible, but went to waste, which was our intended concept of food waste for this project. Words like “spoiled” and “expired” were salient throughout the groups. Additionally, in this introductory part of the focus group, multiple people brought up negative emotions associated with food waste like guilt, shame, and frustration.

In at least two of the three focus groups, participants said the things they throw out most often included produce (especially lettuce and greens), condiments, leftovers, and items purchased in bulk.

In discussing food waste, several participants were inclined to turn the conversation to their food waste disposal methods, expressing the common misperception that food waste recycling (composting) eliminates the harm of food waste. Residents tend to disregard the economic and environmental implications of food production.

Percentage of food thrown away

Almost all participants said they throw away 25 percent or less of their food, with about one-third who responded to the question reporting 5 percent or less of food wasted. Compared to the average Minnesota family, most focus group participants thought they wasted less food. If their estimations were correct, they do waste less food than the average family (25%) (Gunders, 2012). It is possible that the people who agreed to participate in the focus groups are more interested in food waste issues than the general population, so they might also waste less food than the average family. It is also likely that participants underestimated the amount they throw away, and there is some social desirability in this question (participants want to reflect themselves in the best light possible, or want to provide the “right” answer regarding their household’s food waste).

Reactions to statistics

When asked for their reactions to the statistics that the average American family wastes 25 percent of food and beverages they buy, which is estimated to cost the average U.S. household of four between \$1,350-2,275 (Gunders, 2012), emotions like frustration and guilt came to the surface. The frustration and guilt were related to several different outcomes of wasting food including the actual wasting of tangible food, wasting of money, and failing to redistribute that food to others who needed it.

A lot of [food] ends up in the trash and it's super frustrating. That's my money! It's like there are dollar bills in there!

The guilt is a big thing. It's your money, and you want to be good with it, a good steward of it. So many times, when I clean out the refrigerator and there's that produce or whatever it is, there's that shame of wow, I am just not doing well on this!

It's sad to realize that so many families don't have the food, and here I'm throwing it away – perfectly good food and can't manage to do anything with it. In that sense, it's frustrating that I'm throwing perfectly good food away that I have every intention of cooking and using, but life happens.

In addition to the guilt and frustration, some participants noted that food waste is an inevitable or natural byproduct of our society and lifestyle choices.

It's the cost of a fast-paced life. Maybe the cost of doing business for some people.

It's just a natural part of living where we do. Everyone has lots of money, there's plenty of food; it's really cheap... It's life, it's where we live. We like convenience and all that stuff. It's a difficult thing. It's a problem because we are where we're at in society.

These statistics also inspired discussion about reasons for, and challenges of, reducing food waste.

Difficulties in using up food

Poor planning and cooking execution

In conjunction with a busy lifestyle, residents explained that they often lose track of what they already have at home and forget to check their shelves at home before shopping.

In my house, it's poor planning. And it's "Oh, I forgot I bought that!"

I have to go through the cupboards every now and then, and I've got kids saying I want that cereal, that one, that one, and eventually I've got eight boxes each with one-quarter eaten.

For meal planning, even if planning was there, the cooking does not always happen. People have good intentions to cook or use the food they buy, but then something comes up, and they do not have time, and food goes to waste. This was a main theme across focus groups.

Planning - don't have time to make dinner, so you have to do something fast, and then the stuff you were going to eat just sits, and then goes bad.

[I] get home too late at night, [and I'm] not going to start cooking a meal, just need food to get in your stomach, so whatever's open on the way home. White Castle.

Sometimes I have to call my husband and say "get a Little Caesar's, I don't have time to cook" and then I forget to put the meat in the freezer. It's the busyness.

Busy lifestyle. You plan to make something or use it up and then you're busy and don't use it.

Also, when people buy food, sometimes they lose their appetite for it, and it goes to waste.

I get sick of it.

It looked good at the time and then it sits on my counter for three days and then ugh.

Additionally, there was a theme around poor cooking execution when trying new recipes or when teaching kids to cook. People get excited to try new recipes, but then they make it and they do not like it as much as they hoped, so the leftovers go to waste. In some cases, the new recipes also call for ingredients that are not staples in the household, so they are harder to use if the recipe does not use all of it. Also they noted that when people are learning to cook and it does not turn out, then that food goes to waste.

I bought all of the stuff, and it's not that I throw produce away but I have all of the things for this recipe that nobody wants to eat. At some point, I'm done fighting to get one of the kids to eat it.

Social media, finding a cool recipe and wanting to try it, but realizing the kids are never going to eat it. I made enough for the family, but my husband and I are the only ones to eat it, so now we have a whole bunch left and it's fine but not that great...it will probably go in the garbage and I just won't make that recipe again. And you have that bottle of whatever that you need to buy to make it.

My son liked to try experimenting and he'd put too much salt in stuff. Then you might as well just throw it out, you're not going to salvage it.

Challenges with children

Many parents noted challenges with their children refusing to eat certain foods. Parents noted that one week their kids like something, and the next week they refuse to eat it, so now they have extra food that goes to waste. They described their struggle to provide a

nutritious diet for their children without throwing away everything their children refuse to eat. They also discussed that the habits they learned as children impact the way they view food and food waste now. Overall, there were varying opinions on the best approach to this issue.

Last week they liked broccoli, now they don't. And there are dietary issues in my house, too, so that's always hit or miss. We try this new thing, maybe he'll like this, and he didn't. Honestly, if it wasn't for children, I probably wouldn't waste very much food.

We're more accommodating to our children now than in previous generations. Some days I'm cooking four meals for three kids. I keep saying one of these days I'm going to force you all to eat the same thing, but the pediatricians are saying now you should let them eat what they'll eat, but he can't live on hot dogs! The food that I intend for him gets put in the fridge and sits there.

If they ask for more, take more, but if you took the seconds, then you need to eat those. I'm not a believer of the clean-plate club, I wasn't brought up that way, so I'm trying to teach the kids to take what they think they'll eat and come back for more.

Buying in bulk

Buying in bulk was another big consumer challenge that sparked conversation in all three focus groups. For participants, buying in bulk meant buying larger quantities because it was less expensive per unit. Participants said they buy in bulk (e.g., a package of several heads of lettuce) because it saves them money, but then they have more food than they need. Often times, even if they throw away some of the food, it is still cheaper to buy in bulk than to buy appropriate quantities in smaller packaging. There was also concern over the trade-off between buying in bulk and having less packaging waste, but potentially more food waste, versus buying smaller quantities of food but having more packaging waste.

More people are buying in bulk. It's cheaper to buy in bulk and then throw it away.

It's very efficient for larger families. If the packages are smaller, I feel like I'm causing so much more packaging waste. It sucks that I throw food away, but at least that will decompose and not stay waste.

I used to buy, when I had a family, the 15 pound bag of onions. Even if I threw away a third of them, it's still cheaper.

Benefits to reducing food waste

Participants were asked what benefits they saw to reducing food waste. After brainstorming these benefits, participants were asked to vote for the benefits that resonated most with them. They were each given three stickers to use to vote, and they could put all of their stickers on one benefit or they could put them on multiple benefits. The most popular benefits are shown in Figure 5 below.

By a large margin, saving money was noted as the most resonant benefit of reducing food waste. In each focus group, it was the first benefit that came up, and it received the most votes. Overall, saving money received 44 votes, more than double the next highest benefit.

Reducing trash was the next highest benefit, which included both decreasing trash in the landfill, and also decreasing trash in the household’s trash can. The idea of reducing odors in the trash can also came up in one group. Saving resources was a close third. The idea of saving resources came up differently in each group. This category includes decreasing transportation costs, better ecosystem management, and saving natural resources like water, soil, and gas.

5. Benefits of reducing food waste

| Benefit | Overall number of votes |
|--------------------------------|--------------------------------|
| Save money | 44 |
| Reduce trash | 19 |
| Save resources | 14 |
| Make food available for others | 6 |
| Increase fridge space | 5 |

Note: Aside from saving money, the categories varied across groups; the precise wording and meaning of each theme varied, and the last two themes were each identified in only two of the three groups. In some groups a whole category was lumped together and voted on, and in others, they were broken down into separate categories. The table above only shows categories that came up in two or more groups. Votes should be interpreted with caution.

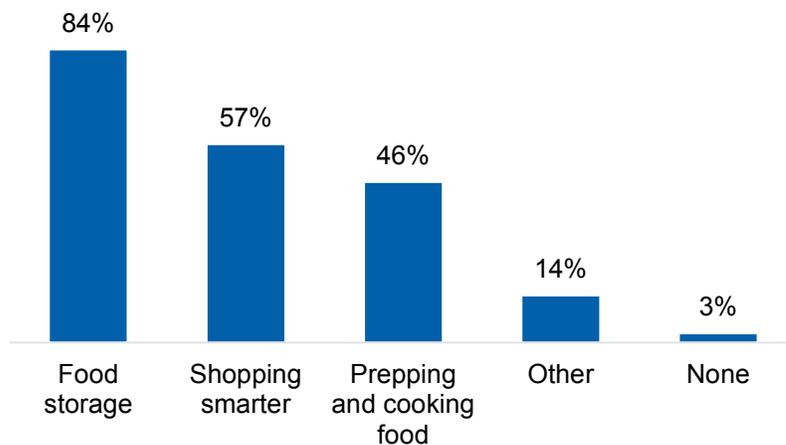
One focus group also focused on three benefits that did not come up in other groups. They included less guilt and frustration (7 votes), eating nutritious food (if you are not wasting good-for-you food, you are actually eating it - 5 votes), and fewer animals going to waste (4 votes). Because guilt and frustration were a central theme across focus groups in responses to other questions, this benefit of decreasing guilt and frustration should be noted as a key theme.

Strategies to reduce food waste

This section describes several food waste reduction strategies that Dakota County residents currently use to reduce food waste and their ideas on what would help them further reduce their food waste. Focus group participants identified a wide variety of food waste reduction strategies, from food storage and preservation methods to food sharing and creative cooking. When asked about food waste reduction strategies that participants would most like help with, most said they would like to learn more about proper food

storage and smarter shopping (Figure 6). Participants identified several other food waste reduction strategies and opportunities for resident education on these strategies, described in detail in the sections below.

6. Which areas do you feel you need the most help with to reduce your food waste? (N=37)



Note: Data from the Dakota County Food Waste Discussion Group Post-Survey

Proper food storage

While some participants said they were already properly storing foods and using tools like ethylene absorbers to extend the life of produce, 84 percent of participants said food storage was an area that they would like more help with (Figure 6).

This was also the primary area where participants learned from each other throughout the focus groups, as storage tips were commonly added into conversation. Ninety-four percent of participants said they learned something from the focus group, and when asked what they learned, two-thirds of participants explicitly stated something related to storage (See Appendix: Post-Survey Results). In addition to discussing the use of tools like ethylene absorbers and asparagus storage cylinders, participants exchanged several other produce storage tips.

Like lettuce, putting it in Tupperware with a paper towel is supposed to help prolong it.

The storage at home is actually really important. The crisper in your fridge has areas that are wet and cold. Don't put your apples with your bananas, because they'll make your bananas ripen super-fast. The way you store your vegetables at home can make a really big difference.

Food preservation

Participants said they reduce food waste by employing various food preservation methods when they have more food than they can eat right away. In each group, one or more participants reported freezing, canning, dehydrating, or using a vacuum machine to preserve excess food for later use.

We freeze meals when I make a big batch.

I'll put some of my garden herbs pureed in ice cube trays in my freezer and I can use them up when I need them.

While some residents reported using these preservation methods to reduce their food waste, others would like to learn how to do so.

Canning, jam freezing – I don't know how to do that stuff. I wish I knew how to do that stuff.

Different ways people can use up produce. Sometimes you get a lot of garden produce all at once you can't use it fast enough [Facilitator: So tips on preserving garden items would be helpful?] Yes!

Creative cooking and using leftovers

Many participants noted creative cooking and use of leftovers as a way to reduce food waste, including various strategies such as having an “eat it up night,” which is a meal of a variety of leftovers. Others noted making soup or smoothies or incorporating leftovers from one meal into another.

Every now and then we have “eat it up” night. Pull out everything that needs to get eaten in the next few days.

On Friday we'll have leftover day, and the kids love it because they can choose, and they're still getting their required needs. They love the choices!

If somebody in my house gets full and can't finish what's on their plate, I don't make them finish it, but I say get a container, package it up, and they'll have it first thing with their next meal. Even if it's breakfast. And it's not something they dislike, they're just like “oh, I've got something to eat up first before I have whatever the next thing is.”

I love the idea of smoothies or soups. One of the Dakota County magazines that comes out could have recipes for smoothies or soups or something to make use of those soft fruits and things like that.

Participants also requested recipes for leftovers, ingredient substitution lists, and apps to enter ingredients and receive recipe recommendations.

Meal planning, inventory management, and smart shopping

Many participants noted that they already make meal plans and shop with a list, but 57 percent of participants said they wanted help with shopping smarter (Figure 6). Residents identified the need to be more aware of the food they have before going shopping, and to communicate more about who is buying what.

Meal planning – I've looked online to get help on how to plan meals for the week. Can't find anything in the book store, the library, even online. There's nothing that's really good for meal planning.

A menu helps a lot.

My wife will go shopping and buy mayonnaise and I go in the cabinet and say we already have one!

We need to check our inventory, check what we have, more often, at least what we have in the refrigerator.

Residents also described the need for increased communication in their household for meal planning to be successful.

Increase communication. You can't plan a menu unless you know who's coming, who's going, who's going to be around, who's not going to be around. You have to actually talk to your family and find out where they're going to be doing dinner.

Buying habits

Several focus group participants noted that they try to be mindful of their grocery shopping habits, particularly through going to the store more often and buying in smaller quantities.

Just in time grocery shopping – I live across the street from the grocery store, so I go over there and pick up what I need and go home and make it. Then there's nothing to throw away.

We buy less and go to the store more often. On the flip side, you're driving more often to go to the grocery store, but if you work that into another trip....

For some residents, frequent shopping is an effective food waste reduction strategy, but others see this as infeasible.

It's your time, your gas, your car -for me it would not be efficient. I don't want to go [to a grocery store] 3 times a week.

Sharing extra

Many participants reported that they opt to share when they have a surplus of food. This could be a formal donation like to a food shelf, or giving food away to a family member, friend, or neighbor.

Give it away -send friends home with leftovers, neighbors don't cook a lot so I give it to them.

If you buy in bulk, you can donate stuff to food shelves.

In my garden, zucchinis go nuts, and tomatoes – you can only eat so many – you give them to the neighbors.

One participant voiced the desire to give food away, but was not sure what was accepted at food shelves and could benefit from information on guidelines for donation.

Better ways to give away food. If I buy a frozen meal for my kid, and he doesn't want it, could I give it to a food shelf?

Others mentioned splitting bulk items and exchanging meals.

Clarification on expiration dates

Many residents expressed confusion about the differences between “expiration,” “best by,” and “sell by” dates, and what those mean for the health of the consumer and quality of food.

My old boss used to bring yogurt every day, and one day she was eating it a month past the expiration date. She said “it's fine, yogurt doesn't expire!” and I was like “I throw that stuff out the day after it expires!” We need to understand what we can eat.

Food labeling – the “best by” and “use by” dates are very confusing, and they often have nothing to do with food safety. Taking that one step further, it would be good if there could be a way to know if something is bad. If it's a week past its expiration date, are you at risk? Something besides smelling it.

Get grocery stores involved

Many participants said they want more information at grocery stores, including information on proper storage, how to tell if produce is ripe, and meal plan ideas.

I remember seeing somewhere, maybe with avocados, with pictures saying “ready today, ready next week, ready in two weeks” How great! I'm going to get one of each and then I can spread them out – they won't all be ready at the same time.

In the grocery store, would like to have a sign, for example by the grapefruit or the apples about the best way to store this. Some signs around it with some tips.

If the local grocery stores did the meal planning, so you'd walk in and get an idea of a meal plan and it would tell you where things were.

Education

Residents expressed interest in education on many topics, including food storage, preservation, meal planning, expiration dates, and how to tell if produce is ripe. Some suggestions of where and how that information could be disseminated included home economic classes in schools, Dakota County pamphlets, in grocery stores, at compost sites, and on food packaging. Participants in one focus group strongly recommended putting information on food packaging.

Education – classes, a website, ideas on how to organize your pantry, so you can find things, what things can be frozen well, how to preserve things before they go bad, what things should be refrigerated, what shouldn't.

It would be nice if the packaging said the best way to store it. Sometimes it says refrigerate, but should it be in a sealed container, unsealed container, veggie drawer – which drawer do I put it in.

Printed materials, websites, and apps were all desirable formats for educational materials, though apps were especially popular.

Each focus group mentioned apps as potential tools to reduce food waste. Residents want apps to:

- Take a list of ingredients that need to be used up and provide a recipe with a shopping list of additional ingredients needed for the recipe
- Tell you how to store and use a given food
- Assist with meal planning and shopping lists
- Help manage kitchen inventory

The one thing with this, especially as you're dealing with younger generations is that a piece of paper is not as good as an app. My wife sees something, wherever this might be in the house, but I'm in the grocery store and my wife is texting me everything I need, or she'll call me but I don't have anything to write on. If you have an app you can open up, that shows everything you need for the week.

There are apps that learn how you inventory your kitchen. I have it. I never use it though. I carry my phone everywhere I go, but I'm not going to sit there with my refrigerator open typing things into my phone.

Some residents suggested apps that already exist with these functions.

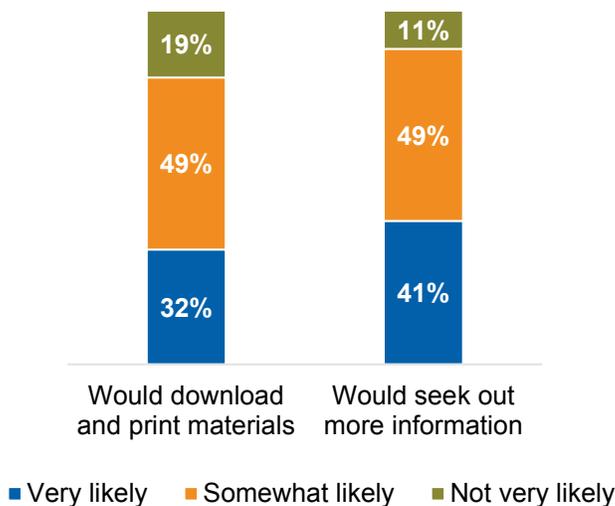
There's an app that I think is called "what's in my fridge" where you put in the ingredients and it tells you what to buy to use it up.

It is important to note, however, that apps will not work for everyone, and materials need to be accessible in a variety of formats.

Interest in getting materials on their own

Dakota County Environmental Resources Department is considering using some types of public service announcements or ads related to preventing food waste; we addressed the potential effectiveness of this approach during the focus groups. In the post-survey, participants were asked how likely they would be to seek out more information after hearing a public service announcement about food waste prevention and how likely they would be to download and print tools. Forty-one percent of people were “very likely” to seek out more information, while 32 percent were “very likely” to download and print materials (Figure 7). Some people noted on their survey form that they would be likely to download tools but not necessarily print them. When asked what they would search for to find more information about the tools discussed, most commonly people said “food waste” or some variation like “food waste reduction,” “reducing food waste,” “food waste prevention,” or similar terms. People also would search for the specific topics like “food storage” or “meal planning.”

7. How participants would get materials (N=37)



Tool feedback

Dakota County selected five tools to show to participants. These included two smarter shopping tools, one set of storage stickers, and two storage guides. Participants were asked to give their feedback on the usefulness of the tools and what they would do to improve them.

Smarter shopping



“Food: Too Good to Waste” Shopping List (Environmental Protection Agency, n.d.b)

Overall, this shopping list was not very popular. Very few said they would use the tool (only 4 participants out of 37). Several people noted that they were already doing a similar process, it is not a new concept, and they did not feel like they needed a formalized paper to do it or that the paper would not work. Several also said they did not think about shopping in the same way as the tool presented.

I'd use it in my mind. I'd follow it but not on a sheet of paper.

I don't think this way. I don't think about the number of servings in a box of salad. I just eat it until it's gone.

I think it misses the step for meal planning. It's just here are the things you need. My kids could tell you that.



Eureka Recycling Meal Planner (Eureka Recycling, 2012b)

The Eureka Recycling meal planning tool with the shopping list was much more popular than the “Food: Too Good to Waste” shopping list. In one focus group, no one said they would use it, but in the other two focus groups, the majority said they would use it. People liked the meal planning aspect and the fact that it included the whole week. Many people said this was similar to how they approach meal planning for the week, so it was not inventive or new, but would be a good reminder, particularly to hang on the fridge.

That one is more useful because you're actually looking at the whole week, all the meals.

This could be a conversation starter – hey guys, I've got a blank page. What are we going to have this week?

When I think of meal planning, this is what I do.

If you have this hanging out, it will remind you, oh shoot, I have to pull this out. If you hang it on your fridge, it keeps on reminding you and helps you stick to it.

Suggestions for improvements included having a calendar section to be able to put in activities that would shape meal plans for the week, making sure to leave space for or have a reminder about using leftovers, including school lunches as an area, and turning it into an app.

If this was an app that goes with a cookbook, and you flip through the cookbook, click yes, I want to make this for 8 people tonight, and what do I need to have - click yes I have this, I need to get this, and it makes a shopping list.

I also take my calendar out, so maybe a notation for what's going on that night also. Oh, Wednesday we're going to be at church, so that's not going to work. Combining the two things.

It's missing one category for me, school lunches. We go through a lot of food for school lunches, three-quarters of a loaf of bread, fruit, snack (granola bar or whatever), so the school lunch planning is a big portion of the grocery shopping. And the afternoon snack.

Storage tools



Eat First sticker

(Environmental Protection Agency, n.d.a)

The Eat First sticker was designed to be a large sticker to be placed on a box or a shelf in the refrigerator. The goal is to signal that the contents of that space need to be consumed before other food. Some participants liked the idea of the sticker, but were not sure of the practicality of having a designated box or area.

We don't have an area that we could designate as an eat first section, our problem is we can't get stuff in the refrigerator. We just can't fit everything in. I love the idea, I just don't know how practical it would be.

I don't know if I'd use it for an area in my fridge, but my husband likes to buy too many eggs, so I might move it around and stick it on something we want to use first.

Other residents expressed skepticism about the tool and noted the possible negative effects of the sticker, like having family members avoid the “Eat First” foods.

They're going to eat what they want, whether it says eat first or not. If they really want what's behind it, they're going to go for what's behind it.

This could also backfire if you put stuff in there that's...questionable, they're going to say, "I'm not eating anything in that box!"

As an alternative to the sticker as originally designed, participants in two focus groups suggested making smaller stickers to put on individual food items. The smaller stickers could help, for example, to designate the open gallon of milk or carton of eggs so it is clear not to open a new one.

As it's designed, it doesn't work if you store food properly. But if you had a sheet of smaller stickers and you put it on the product that you want them to use up, that would be great.

For families with kids, this would be helpful so they don't keep opening new things. So this is great for families with kids, but it would have to come on a lot of sheets.

If you store your stuff in a plastic container that isn't see-through, you don't know what's in there, so if you're lazy, you never take it out and open the cover, and it keeps going to the back and it's all covered with mold. That's where a little sticker like this could help – it would say, "Hey, there's something good in here! Eat it!"

The smaller sticker idea was significantly more popular than the large sticker (4 would use the large version, and 22 would use small stickers). However, there may be challenges with smaller stickers adhering to items in the fridge. Testing should be done with smaller stickers if Dakota County selects that option.



King County Storage Guide (King County, n.d.)

This storage guide included a condensed version of produce storage and also tips on expiration dates, and was very well-received at all three focus groups. Participants thought the tips were helpful and liked its compact size. More than 30 people said they would use it or thought it was helpful.

Many noted they would put it on their fridge, and a couple of people suggested turning it into a magnet. Another suggestion for improvement was adding information about how long things keep.

This is a useful concise summary. I could see someone taking this to the store, maybe in a different format, and referencing it if it had info on how to pick them ripe. Need info on how long it keeps, too.

It's awesome! Love it!

It's a lot of information in a very compact presentation.

Easy to find whatever you're looking for.

There's new info on here, things I didn't know before.



Eureka Recycling A-Z Food Storage Tips (Eureka Recycling, 2012a)

This longer, more comprehensive storage guide was also well received at the focus groups. The majority of participants thought this was also helpful and useful. They liked that it included more than just produce and was comprehensive. Several people noted that they would like it bound to put with their cookbooks or would want to hang it in their cupboard.

I'd put this on the inside of my cupboard door.

If this were in a booklet form, it could go with my cookbooks

I like this because it has a lot more items, like pasta and oils. The other one was mostly fruits and vegetables but this has a lot more items that could be useful.

I love the extra info on the long one but I wouldn't leave it out in my kitchen because it's too large and it would eventually end up in the pile where I keep interesting stuff that I don't want to throw away.

Participants saw the merits of both the short and the long guides and saw them as serving distinct purposes. Several said they would put the short guide on the fridge and the long guide in their cupboard or with their cookbooks.

I think they have different purposes. I might use the longer one as an educational tool that I can refer to a couple of times a year, and the shorter one should be a large magnet so I can put it on the fridge and everyone in the family can refer to it all the time.

I'd tape the long one in my cabinet. The short one would be good as a mailing, draws my attention.

I'd be more inclined to look something like this [the long one] up on the web. The blue is a reader's digest version.

They're both good. Why would you have to choose? Why not have both?

I like having [the long one] printed. I don't want to go to a website, - oh what's the best way to store pomegranates- I'm not going to look it up, but if this is sitting there – it's easy, rather than waiting for the computer to launch.

Having them available in both print and online was also important because some want to have less paper, and some think paper is easier to use in the kitchen. If they had to choose, 21 said they would choose the King County guide, and 15 would choose the Eureka Recycling A-Z Food Storage Tips. Participants also suggested listing ingredient substitutions in conjunction with either guide or as a separate document.

Slogans

At each focus group, participants were asked to help develop slogans for the pilot program that would build off the themes of the evening and capture the attention of their fellow Dakota County residents. Everyone brainstormed their ideas in groups of two or three, and at the end, posted all of their ideas up on a wall. Wilder staff read aloud each idea and gave participants three green stickers to put on the ones they liked the most, and one red sticker to put on the one they liked the least. Participants could put all of their stickers on their favorite slogan, or spread them out across multiple slogans; most people chose to spread them out. For the first focus group, Dakota County and Wilder had brainstormed a few ideas prior to the focus group to put up to get people started. For subsequent groups, slogans that had a high number of stickers, or votes were carried over into the next group.

The slogan with the highest number of votes was “Got a lot? Don’t let it rot!” Figure 8 shows the top slogans from the groups. It should be noted that slogans created in the later groups had fewer chances to be voted on, and further voting with a broader audience would be recommended to select the slogan for the county-wide education program. A full list of slogans that received at least two votes can be found in the Appendix.

8. Top slogans from focus groups

| Slogan | Number of votes |
|---|-----------------|
| Got a lot? Don't let it rot! | 12 |
| Buy what you'll EAT & EAT what you buy | 6 |
| Get creative before you waste it | 5 |
| 25% food tax?! Look in your trash! | 5 |
| You paid for it, now eat it! | 5 |
| Got milk? Don't buy more. (also applies to other dairy) | 5 |
| <input checked="" type="checkbox"/> before you buy | 5 |
| Don't let your fridge be a landfill | 4 |
| Those veggies only work if you eat them | 4 |
| Creative cooks create less waste | 4 |
| Food for thought - not for rot! | 4 |

Note: Only slogans with 4 or more votes are listed here.

Recommendations

Areas of focus for educational materials

- **Focus on saving money as a benefit.** By far, saving money was the benefit that resonated with the most people. Highlight this benefit in marketing materials to attract attention to the value of food waste reduction.
- **Capitalize on proper food storage.** People are interested in food storage, they like sharing tips about it, they are open to learning more, and they want help in this area. In particular, lettuce and greens are commonly thrown out and would be a great example to use in marketing materials.
- **Showcase recipes for creatively incorporating leftovers.** Participants want recipes for how to use up things that go bad quickly and use up odds and ends. Soups, smoothies, and recipes with ability for substitutions would be useful.
- **Clarify expiration dates.** This is an area of great confusion, and therefore an important theme to address in educational materials.
- **Encourage meal planning.** Over half of participants said they wanted help with meal planning, and poor meal planning was a frequently cited barrier to using up food.
- **Address buying in bulk.** Buying in bulk was a main source of food waste and an area where habit changes could come into play. Encouraging thinking carefully about bulk shopping could be something for Dakota County to address in the education program.
- **Encourage food sharing.** Promote food donation processes and sharing with friends and family, especially when buying in bulk. Perhaps include suggestions for setting up meal exchanges with friends or other creative ways to share food.

Suggestions for tools and dissemination strategies

- **Get grocery stores involved.** People want information at the grocery store. Information about storage, ripeness, and meal planning could all be incorporated into grocery store displays and signage.
- **Develop new apps or encourage the use of existing apps.** Apps were strongly suggested by focus group participants as tools to help them reduce food waste. Apps

could be used for shopping, meal planning, taking stock of inventory, and containing information on storage and expiration.

- **Use Eureka Recycling Meal Planner tool or similar list tool that has meal planning.** This tool was far preferred to the “Food: Too Good to Waste” shopping list. Consider laminating or turning it into something that could be reused and put on the fridge, such as a magnet. Also consider adding a schedule component, place for school lunches, and reminder about using leftovers.
- **Create smaller versions of the Eat First sticker.** The Eat First sticker idea was liked but not as practical in the larger form. Create smaller stickers or use a different way of marking food that needs to be used first.
- **Have both storage guides available.** Both storage tools (King County and A-Z storage guides) were well liked by participants, and they saw them as serving different purposes.
- **Make storage guides ready-to-use.** Consider putting the King County storage guide on a magnet to put on the fridge, and bind or put the A-Z guide on a ring to hang in a cabinet, as those were the ways participants said they would like to use them.
- **Promote or create ingredient substitution lists.** Substitution lists would complement storage guides and help residents avoid buying specialty ingredients that they will use only once and ultimately throw away.
- **Make resources available in a variety of formats.** It was important to participants to have resources available as paper copies and on the web.
- **Use educational messaging in multiple places.** Participants want more information about reducing food waste and want it in a variety of places. These could include: schools, Dakota County pamphlets, grocery stores, compost sites, and on food packaging.

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Appendix

Recruitment methods

Wilder purchased a random sample of 5,500 phone numbers in Dakota County from Marketing Systems Group, and called through 2,696 numbers. Half of the sample was landline phone numbers, and half was cell phones, and the numbers were tagged to target families with children at home. Overall, the goal was to recruit 8-12 participants for each group. In order to achieve those numbers, especially with a randomized phone sample where participants do not have previous familiarity with the project or buy-in, the recruitment target was 20 people per focus group. Between 19 and 27 people were originally recruited for each focus group, including participants who signed up for the focus group via fliers posted in Dakota County libraries.

Slogans

9. Top slogans from focus groups

| Slogan | Number of votes |
|---|-----------------|
| Got a lot? Don't let it rot! | 12 |
| Buy what you'll EAT & EAT what you buy | 6 |
| Get creative before you waste it | 5 |
| 25% food tax?! Look in your trash! | 5 |
| You paid for it, now eat it! | 5 |
| Got milk? Don't buy more. (also applies to other dairy) | 5 |
| <input checked="" type="checkbox"/> before you buy | 5 |
| Don't let your fridge be a landfill | 4 |
| Those veggies only work if you eat them | 4 |
| Creative cooks create less waste | 4 |
| Food for thought - not for rot! | 4 |
| Reducing food waste makes cents | 3 |
| Food: too good to waste* | 3 |
| Don't feel bad, feed your dad! Share your leftovers. | 3 |
| Plan ahead...waste less | 3 |
| Trash cans: not meant for your food | 3 |
| Eat you leftovers...coming to a fridge near you | 2 |

9. Top slogans from focus groups (continued)

| Slogan | Number of votes |
|--|-----------------|
| Save money, save trash, save food! | 2 |
| Recipes: Reinventing leftovers everywhere | 2 |
| Eating leftovers saves lives | 2 |
| Food is important - don't waste it! | 2 |
| Keepin it fresh | 2 |
| Buy 2...donate 1 | 2 |
| Food: use it or lose it | 2 |
| Keep it fresh, you'll waste less | 2 |
| Food is a terrible thing to waste | 2 |
| How many different meals can you get from one turkey** | 1 |
| Love food, hate waste* | 1 |

*Indicates a slogan introduced by Dakota County that is already in use for a food waste reduction campaign elsewhere.

**Slogan had 2 green dot votes originally, but also got a negative red dot vote, so the net was 1 vote.

Post-Survey results

10. What participants learned

| Area of learning | Percent (N=32) |
|-----------------------|----------------|
| Storage tips | 66% |
| General tips or ideas | 22% |
| Awareness of issue | 16% |
| Meal planning | 3% |
| Other | 9% |

Dakota County Food Waste Discussion Group Post-Survey

1. In general, how committed are you to reducing food waste?

- ¹ Very committed
- ² Somewhat committed
- ³ Not very committed

2. In general, how interested are you in environmental issues?

- ¹ Very interested
- ² Somewhat interested
- ³ Not very interested

3. Did you learn anything new at today's discussion group?

¹ Yes → 3b. What did you learn?

² No

| |
|-------------------------|
| <hr/> <hr/> <hr/> <hr/> |
|-------------------------|

4. Which areas do you feel you need the most help with to reduce your food waste? (Mark all that apply)

- ¹ Shopping smarter
- ² Food storage
- ³ Prepping and cooking food
- ⁴ Other (Please specify: _____)
- ⁵ None

5. If you were to do a general internet search to find more information about the tools we talked about today, what keywords would you use?

6. After seeing or hearing a public service announcement for food waste prevention, using the most popular messaging we talked about today, how likely would you be to seek out more information on how to reduce your food waste?

- ¹ Very likely
- ² Somewhat likely
- ³ Not very likely

7. How likely would you be to download and print food waste prevention tools provided on a website?

- ¹ Very likely
- ² Somewhat likely
- ³ Not very likely

8. Are you...

- ¹ Female
- ² Male
- ³ Some other gender identity (specify: _____)

PLEASE TURN OVER

9. What is your age?

- ¹ 18-24
- ² 25-34
- ³ 35-44
- ⁴ 45-54
- ⁵ 55-64
- ⁶ 65+

10. What is your current relationship status?

- ¹ Single, never married
- ² Married or living with a partner
- ³ Divorced or separated
- ⁴ Widowed

11. How many children (under age 18) live in your household?

- ¹ 0
- ² 1-2
- ³ 3-4
- ⁴ 5+

12. What is the highest level of education you have completed?

- ¹ Some high school
- ² High school graduate/GED
- ³ Some college/technical school
- ⁴ Associate's degree/certificate
- ⁵ Bachelor's degree
- ⁶ Some graduate school or more

13. How do you identify your race/ethnicity? **(Please check ALL that apply.)**

- ¹ American Indian
- ² Asian/Pacific Islander
- ³ Black/African American
- ⁴ Hispanic/Latino/a
- ⁵ White/Caucasian
- ⁶ Other (Specify: _____)

14. What is your total annual household income?

- ¹ Less than \$25,000
- ² \$25,000 - \$49,999
- ³ \$50,000 - \$74,999
- ⁴ \$75,000 - \$99,999
- ⁵ \$100,000 - \$149,999
- ⁶ \$150,000 or more

Dakota County Resident Focus Groups Food Waste Protocol

A. Welcome (5 minutes)

1. Background: Dakota County and MN GreenCorps are working to pilot the “Food: Too Good To Waste” program that teaches residents to reduce the amount of food they waste with simple behavior changes and tips. Dakota County will be rolling out a pilot program in March and a county-wide education program later this year.
2. Purpose: The purpose of the focus groups is to learn why households throw away food, and to help Dakota County shape a pilot program to try to reduce food waste throughout the County.
3. Ground Rules (*list on flip chart*)
 - Please participate actively and allow others to do so as well.
 - Be respectful.
 - We’ll keep your opinions and ideas confidential. Please do the same for each other.
 - Eating during the discussion is fine.
 - Others?
4. Describe purpose of note taker and recorder (*to use as back-up in case we miss anything in the notes – we want to record your thoughts accurately*) and ask everyone’s permission to turn it on.
5. Agenda for the evening (*Summarize the discussion and activities*)

B. Introductions (5 minutes)– First name, where you live (neighborhood, suburb, etc.), and how many kids live in your household (if any)

C. Warm-up Questions (15 minutes)

1. When you think of “food waste”, what images or words come to mind?
2. [If applicable:] We covered a couple of different kinds of food-related waste. There’s the stuff that’s pretty unavoidable – banana peels, apple cores, and so on. But there’s also the food that’s edible (or at least was at one point edible) but goes to waste because it wasn’t stored well, because you bought or prepared too much and couldn’t use it all, or for some other reason. In this discussion, we’d like to focus in particular on these sorts of food waste that we could avoid, things like leftovers that don’t get eaten or fruits and veggies that go bad before we get to them. So keeping that in mind, what kind of foods tend to get thrown away in your household? (Probe if needed: are there particular kinds of leftovers, or certain kinds of produce that you seem to throw away more than others?)
3. If you had to guess, what percent of food do you think gets thrown away in your household?
4. Compared to a typical Minnesotan family, would you say your family throws away more food, less food, or about the same amount of food?
5. It’s estimated that American families waste 25% of food and beverages they buy, which is estimated to cost the average U.S. household of four between \$1,350-2,275 every year. How do you feel about those statistics? Do they surprise you? Frustrate you? Make you sad? Do they make you feel interested in learning more about how your family can reduce the amount of food it wastes?

D. Discussion Questions (35 minutes)

1. What do you think makes it difficult for people to use up all of their food? (Follow-up/probe: what makes it difficult for YOU to use up all of your food?) [Optional: Record responses on flip chart]
2. What do you think are the benefits of preventing wasting food? [Record responses on flip chart]
 - Which of these benefits resonates the most with you? Which of these would be most motivating for you to reduce food waste? [Make sure saving money and good for the environment are included. Distribute three stickers to each participant and ask them to place their stickers next to the benefits that are most important to them. Note that they may spread them out to different benefits or place them all by a single one if it is particularly important to them.]
3. What does your family currently do to avoid throwing food away? [Optional: Record responses on flip chart]
4. What do you think would help you reduce how much food you throw away? [Record responses on flip chart. Invite responses before sharing the ideas below.]
 - One potential way to reduce food waste is to plan meals and shop only for the ingredients you need. We have a couple of shopping list tools that might help with meal planning and smarter shopping. [Pass out tool.] (Ask about each tool) Would you find this tool helpful? Why or why not? (Vote on whether participants would use each tool: first ask them to take one more look at the first tool, then instruct participants to close their eyes, then ask them to raise their hands if they would use the tool. Do the same for the other tool(s).) Do you have any suggestions for how we could improve this tool to make it more helpful for you?
 - Proper food storage is another important strategy to reduce food waste, so we have a couple of storage guides we'd like you to take a look at. [Pass out tool.] Would you find this tool helpful? Why or why not? (Vote on whether participants would use each tool: first ask them to take one more look at the first tool, then instruct participants to close their eyes, then ask them to raise their hands if they would use the tool. Do the same for the other tool(s).) Do you have any suggestions for how we could improve this tool to make it more helpful for you?
 - Can you think of any tools for prepping and cooking food that would be helpful for you? (If yes: what kinds of tools would be helpful?)

E. Designing the slogan (20 minutes)

5. *Background: Dakota County is planning on doing a pilot program starting in March and rolling out a full educational program during the summer to motivate households to reduce food waste. We're trying to figure out how to make that program most effective, and how to get people excited about it. For the next section, we're going to brainstorm some possible slogans and messages that we think would be good to grab the attention of Dakota County residents.*
 - a) *Set up "blue wall" and stick our existing suggestions on the board*
 - b) *Give all participants pens/markers and a set of five half-sheets of paper. Make additional sheets available in case they have more ideas.*
 - c) *Split participants into groups of 2-3 people*
 - d) *We have a couple of initial suggestions of campaigning slogans and messaging that we're going to put on the wall. Please brainstorm in your group ideas for words and slogans that you think would catch the attention of the typical Dakota County resident and motivate them to take steps to reduce their food waste. The ideas*

that you write down can include options that we've already mentioned, or make refinements to our suggestions, or you may suggest things that we haven't mentioned. (10 minutes)

- e) Please come up and stick your ideas on the wall. *(As participants are sticking their ideas on the wall, let them say briefly what each one is. After all ideas are on the wall, have a discussion to group similar ideas into categories with the large group)* (15 minutes)
- f) Give each participant three stickers and ask them to place them on the slogans or messaging ideas that would be most likely to catch someone's attention and encourage them to reduce food waste. Share conclusions about the most popular themes with the group. (5 minutes)

F. Survey and Incentives (10 minutes)

- a) *Distribute survey*
- b) Please fill out this survey and then turn it in to one of us. Once you've turned in your survey and signed out your gift card, you're free to leave. Thank you very much for coming!

Tools

“Food: Too Good to Waste” Shopping List
(Environmental Protection Agency, n.d.b)

Eureka Recycling Meal Planner
(Eureka Recycling, 2012b)

Eat First sticker
(Environmental Protection Agency, n.d.a)

King County Storage Guide
(King County, n.d.)

Eureka Recycling A-Z Food Storage Tips
(Eureka Recycling, 2012a)

SMART STRATEGY:

Make a Shopping List with Meals in Mind



**TOO GOOD
TO WASTE**

- Think about how many meals you'll eat at home this week and how long before your next shopping trip.
- Next to fresh items on the list, note the quantity you need or number of meals you're buying for.
- Shop your kitchen first and note items you already have.

.....

| FOOD ITEM | AMOUNT NEEDED | ALREADY HAVE |
|------------------|----------------------|---------------------|
|------------------|----------------------|---------------------|

Salad greens

Lunch for a week

Enough for one lunch

2% milk

Gallon

None

Meal Planner

Plan your meals to help prevent wasting food

Why worry about preventing wasted food? Although composting is a great way to deal with inevitable food scraps like banana peels, it is much better to eat the food we can than to compost it.

Prevention helps the environment as well as our budgets. After all, it takes a lot of resources to get food from the fields to our homes.

While no one buys food with the intention of throwing it away, based on recent estimates, the average household in Saint Paul **wastes up to \$96** worth of once edible food **every month!**

Eureka Recycling has assembled cooking, shopping, and food storage tips and tools to help. Learn more at www.MakeDirtNotWaste.org.

This meal planning tool saves time and money by making it easier to buy only what you will have time to prepare and eat, and reduce the amount of food you throw out.

Use the planner on the back to help you schedule your meals and create your grocery list for the week.

Some tips for planning:

1. **Before you go shopping**, look at your week and plan accordingly. For instance, if you have commitments that won't let you make dinner for the whole family, plan something that everyone can put together themselves, like burritos that use up leftover veggies, scraps of cheese, and a can of beans. Or decide that you will make that delicious meal on Sunday to eat before the big event on Monday.
2. **Think about portion sizes**. Is everyone going to be home for dinner? Do you want leftovers for lunch? Do you need to make the whole package of spaghetti or can you just make two servings?
3. Think about what you will need to make each meal and do a pantry, fridge, and freezer check to **see what you already have** before making your grocery list.
4. Some foods do well stored longer than others. Plan your meals using the hardier foods later in the week. Shop more than once in a week if you know something will not last until the end of the week. Consult our **Food Storage Tips** at www.makedirtnotwaste.org to see how foods should be stored so they last longer and get wasted less.



COMPOST

Make dirt, not waste.

(651) 222-SORT (7678)
www.eurekarecycling.org

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Meal Planner (Week: _____)

Meal planning is an effective tool for reducing food waste that will save you time and money. Use this chart to help plan your meals for the week. Decide what you will make and when and fill in the dish(es) for that meal. Then you can make your grocery list from the “ingredients needed” column.



| | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|-----------|--------|--------|---------|-----------|----------|--------|----------|
| Breakfast | | | | | | | |
| Lunch | | | | | | | |
| Dinner | | | | | | | |
| Snack | | | | | | | |
| To Cook | | | | | | | |

Meals To Make

EX. Stirfry
(Dish or Food Item)

| Ingredients on hand | Ingredients needed |
|-------------------------------|---------------------------------|
| pea pods, rice, cumin, ginger | soy sauce, scallions, mushrooms |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

EAT



**TOO GOOD
TO WASTE**

FIRST!

EAT



**TOO GOOD
TO WASTE**

FIRST!

Fruit and Vegetable Storage Guide

KEEP IT FRESH!

Waste Less, Save More.



COUNTER

Store stone fruit on counter until ripe, then place in fridge.



FRIDGE

Store leafy herbs (except for basil) in a glass of water with a plastic bag over the top.



PANTRY

Store onions and garlic in a cool, dark place separate from potatoes.



FREEZER

Freeze fruits and veggies that you won't eat in time. Brown bananas work great in smoothies or banana bread.



Store apples loose and away from other produce.



Store cabbage loose in crisper drawer.



Fruits/Veggies

How to Store



Apples

Fridge. Separate from other produce.



Artichokes

Fridge. Store in plastic bag or sealed container.



Asparagus

Fridge. Remove bands and ties. Store upright in a glass of water with a plastic bag over the top.



Avocados

Ripen on counter, then store in fridge. Store loose.



Bananas

Counter. Store away from other fruits and vegetables.



Basil

Counter. Remove bands and ties. Trim stems and store in water with plastic bag over the top.



Beans
(green, wax)

Fridge. Store in a plastic bag or sealed container.



Berries

Fridge. Store in a container, lid ajar and lined with a dry towel. Wash just before eating to avoid mold.



Bok Choy

Fridge. Remove bands and ties. Store in a sealed container lined with a damp towel.



Broccoli, Broccolini

Fridge – crisper drawer. Wrap in a damp paper towel.

Fruits/Veggies

How to Store



Brussel Sprouts

Fridge – crisper drawer. Store in a sealed container.



Cabbage

Fridge – crisper drawer. Store loose.



Cauliflower

Fridge – crisper drawer. Store in a plastic bag or sealed container.



Celery

Fridge. Store in a plastic bag or sealed container.



Cherries

Fridge. Store in a plastic bag or sealed container. Wash just before eating to avoid mold.



Citrus fruits

Fridge – crisper drawer. Store loose.



Corn

Fridge. Store loose, keep in husks.



Cucumbers

Fridge – crisper drawer. Store loose.



Eggplant

Fridge – crisper drawer. Store loose.



Garlic

Cupboard/Pantry. Store loose.

For a complete database of food storage tips and their shelf lives, check out StillTasty.com or EatByDate.com.



Apart is better than together

Many fruits give off natural gases that cause nearby produce to ripen and spoil faster. Store fruits such as ripe bananas, avocados, apples and tomatoes away from other produce. Store veggies and fruit in separate fridge drawers.

Fruits/Veggies

How to Store



Grapes

Fridge. Store in a sealed container. Wash just before eating to avoid mold.



**Green onions/
scallions**

Fridge. Wrap in a damp towel or store upright in a glass of water.



Herbs, leafy
(cilantro, parsley)

Fridge. Trim stems and store upright in a glass of water with a plastic bag over the top.



Herbs, woody
(rosemary, sage)

Fridge. Wrap in a damp towel and store in a sealed container.



Leafy greens
(lettuce, kale)

Fridge. Remove bands and ties. Store in a sealed container lined with a damp towel.



Melons

Ripen on counter, then store in fridge. Store loose.



Mushrooms

Fridge. Store in a paper bag.



Okra

Fridge. Store in a paper bag.



Onions

Cupboard/Pantry. Store loose or in a mesh bag separate from potatoes.



Pears

Ripen on counter, then store in fridge. Store loose.

Fruits/Veggies

How to Store



Peppers

Fridge – crisper drawer. Store loose.



Potatoes

Cupboard/Pantry. Store loose or in a paper bag separate from onions.



**Root
veggies**

Fridge. Store in a sealed container with a dry towel.



**Squash -
summer**

Fridge. Wrap whole or sliced pieces in a damp towel.



**Squash -
winter**

Cupboard/Pantry. Store loose.



Stone fruits
(peaches, plums)

Ripen on counter, then store in fridge. Store loose.



Tomatillos

Fridge. Store in a paper bag.



Tomatoes

Ripen on counter, then store in fridge. Store out of direct sunlight.



Tropical fruit
(kiwi, pineapple,
mangoes)

Ripen on counter, then store in fridge. Store loose.



Zucchini

Fridge. Wrap whole or sliced pieces in a damp towel.

Spruce up limp greens

Immerse in ice water for 30 minutes or place upright in a glass of water for a few hours.

Keep ready-to-eat snacks cool

Always refrigerate cut or peeled produce. Store in clear containers so you can see what's inside.

Sell-by, best-by, use-by: What do food date labels really mean?

With one exception, it's not about food safety.

Date labels are confusing and can lead to needlessly throwing away good food. With the exception of infant formula, product dating is set by manufacturers to indicate the latest date for peak quality, not safety. Even if the date expires, a product should be safe, wholesome and of good quality if stored and handled properly.

See the USDA's Food Product Dating fact sheet at fsis.usda.gov for more information.

Food product dating de-mystified:



Use by: Last date recommended by manufacturer for peak quality.



Sell by: Manufacturer's date to tell store how long to display item for sale.



Best before/best by: Manufacturer's recommended date for optimal flavor/quality.



Closed or coded dates: Packing numbers used by manufacturers.

Wasted food = wasted resources

The average American household wastes about 25% of the food they buy – especially produce. When we throw away food, we also waste significant amounts of water, energy, fuel, fertilizer, time and money used to produce, package and transport it.

**Small changes
make a BIG difference!**



What about composting?

Composting is great for food that cannot be eaten (banana peels, egg shells) or has spoiled (moldy leftovers, rotten fruits or vegetables). What's even *better* is to not waste food in the first place.

**As much as possible,
buy what you need
– eat what you buy.**



King County

Department of
Natural Resources and Parks
Solid Waste Division

Waste Prevention • Resource Recovery • Waste Disposal

www.kingcounty.gov/solidwaste

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**Visit recyclefood.com
for more tips and tools
about how to prevent food
waste at home.**

A-Z

Food Storage Tips

Tips for storing food so that it lasts longer and gets wasted less.

Why worry about preventing wasted food? Although composting is a great way to deal with inevitable food scraps like banana peels, it is much better to eat the food we can than to compost it. Prevention helps the environment as well as our budgets. After all, it takes a lot of resources to get food from the fields to our homes.

While no one buys food with the intention of throwing it away, based on recent estimates, the average household in Saint Paul wastes up to \$96 worth of once edible food every month!

Storing your food properly can make it last much longer to help you save money and reduce waste. Eureka Recycling has assembled tips and tools to help on www.makedirtnotwaste.org. Try out a tip. Love it? Hate it? Have a better idea? Log in so you can rate it and leave a comment, or add one of your own.

General storage tips to keep in mind:

Keep apples, bananas, citrus, and tomatoes away from other produce—they give off ethylene gas that makes other produce ripen/deteriorate faster.

Untie all bunches (herbs, greens, etc.) to allow the produce to breathe.

The length of time that the food will last depends on how fresh it was when you bought it. Local, in-season produce will last much longer than something that has been shipped a long way. For all perishable food, use your nose and eyes to determine if it has gone bad. Sometimes, it may just be past its prime for raw eating but can be cooked—pears, apples, berries, or other fruit can be made into sauces, crisps, or cobblers. Stale bread can be kept for breadcrumbs, French toast, or bread pudding.

All frozen things should be in an airtight container with as much air removed as possible. Air contains moisture that creates ice crystals that “burn” the food or make it deteriorate faster. Freezing in a flat, rectangular, clear, glass container works so you can see your food and stack containers. Don't forget to label when it went in the freezer!

Many of these foods can be dried in a food dehydrator or canned with a hot water bath canner or a pressure canner. Check out a dehydrating or a canning guide to find the best recipes for preserving large quantities of produce.

For best results, keep your fridge between 37° F and 40° F, and your freezer between 0° F and 2° F.

Use your fridge's crisper drawer. The higher humidity environment benefits many vegetables by helping them last longer. If you can adjust the humidity setting on your crisper drawer, set it on high humidity for leafy greens or on low for non-leafy vegetables like carrots and cucumbers.

FOOD STORAGE WITHOUT PLASTIC

We are learning more and more about the toxicity of plastic and the dangers of storing or heating food in it. There are alternatives that are safer for you and the environment! To learn more, visit www.eurekarecycling.org/plastics.cfm.



Apples



Store apples in the **fridge** to extend shelf life.

One bad apple can ruin the whole bunch, so eat up the bruised ones first!

For longer storage, store in a cardboard box covered with a damp towel.

Artichokes



Place in an **airtight container** with a damp towel for moisture and store in the **fridge**.

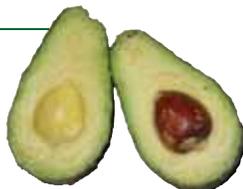
Asparagus



Store asparagus in the **fridge**.

- Trim the base of the stalks and place upright in a jar filled with an inch of water.
- Or, wrap the cut ends of the stalks in a moist paper towel or rag.

Avocados



To speed up ripening, place in a paper bag and place an apple in the bag with them.

Once ripe, store avocados in the **fridge**.

Mix avocados or guacamole with a little lemon or lime juice or leave the pit in to slow browning.

Bananas



Store bananas **on the counter away from other fruit**. They give off ethylene gas, which speeds ripening in other produce.

Bananas can be **frozen** with or without their peel and used later in baked goods or smoothies.

Basil



Basil is a warm weather crop and turns black quickly in the fridge. Store **on the counter** in a glass of water like a cut flower with the stem in the water, or wrapped in a dry paper towel in an **airtight container**.

Beans, cooked/canned



Store unused cooked beans in the **fridge** in their liquid or water.

You can **freeze** cooked beans in liquid. Put cooked beans in a can/freeze jar and fill with cooking liquid or water.

Beans, dry



© photobunny (Flickr)

Store dry, uncooked beans in an **airtight container** in a cool, dry place.

Beans, green

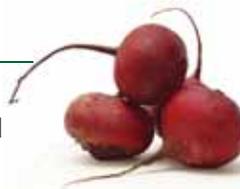


© Luis Tamayo (Flickr)

Store unwashed green beans in the **fridge** in an **airtight container**. Wet beans will develop black spots and decay quickly.

Green beans can be **frozen**, either raw or blanched. Freeze on a cookie sheet in a single layer and transfer to an **airtight container**.

Beets



Store beets in the **fridge** (greens removed) in an **airtight container** with a paper towel inside to absorb moisture.

You can **freeze** beets by blanching them and storing in an airtight container.

Don't forget to eat the beet greens! Check out "Greens, cooking" for more information on how to store them.

Berries



Before storing berries, remove any spoiled or crushed fruits, and store unwashed in an **airtight container**. Try not to put them into too many layers because berries are fragile.

Don't wash until ready to eat—any added moisture encourages mold. If you must wash them, we have heard that adding a little white vinegar to the water helps keep them from deteriorating as quickly.

Store excess berries in the freezer in an **airtight container**. Freeze them on a cookie sheet first before transferring to a container to avoid sticking.

Bitter melon

Store in an **airtight container** in the crisper drawer of the **fridge**.

Can be frozen if sautéed first. Store in an **airtight container** in the **freezer**.



© Dave Le (Flickr)

Brussels sprouts

If Brussels sprouts are on the stalk leave them on that stalk. Put it in the **fridge** or leave it in a cold place.

If they are loose, store them in an open container in the **fridge** with a damp towel on top.



© krgjumper (Flickr)

Bread & Breadcrumbs

Store fresh bread wrapped in a cotton bag or wax paper in a bread box or metal tin **on the counter**.



To freshen up a day-old loaf, hold it very briefly under a running cold tap. Give it a good shake and pop in a hot oven for about 10 minutes; it will be as soft and crusty as freshly baked bread.

Store sliced bread in an **airtight container** in the **freezer**. Thaw in the microwave or toaster.

Store stale bread, crusts, and crumbs in the **freezer** to use for making breadcrumbs. Store breadcrumbs in an **airtight container** in the **freezer**.

Broccoli

Store broccoli loosely in the **fridge**. You can wrap in a damp towel or cotton bag.



© Kratka Photography (Flickr)

The stalks can be eaten, too! Store the stalks in an **airtight container** with a paper towel. Peel and shred them to make a broccoli slaw or cut them and put them into soups.

Broccoli can be blanched and put in the **freezer** in an **airtight container**.

Brown sugar

Store brown sugar in an **airtight container**.



Try keeping a few marshmallows or a slice of bread on top of the sugar to keep it from drying out and getting hard. Or, a brown sugar “teddy bear” clay disc might be a good option to help keep your sugar from getting hard. Soak the disc in water for 15 minutes once or twice a year.

Butter

When storing butter in the **fridge**, don't keep it in the door (often where the “Butter” compartment is) because that is often warmer than other parts of the fridge, and could make it spoil more quickly.



Butter can be stored in the **freezer**. Cut it into tablespoon-sized chunks and store in an **airtight container**.

Cabbage

Store cabbage in the crisper drawer of the **fridge**.



Peel off outer leaves if they start to wilt. Eat cabbage first as it goes bad more quickly than other produce.

Carrots

Cut the tops off carrots to keep them fresh longer.

Store carrots in the **fridge** either in a container of water or unwashed in an **airtight container** in the crisper drawer with plenty of moisture.



If you have a lot of carrots at the end of the season, store them in buckets of damp sand in a **cool, dry place**.

Cauliflower

Store cauliflower in an **airtight container** in the **fridge**, but eat cauliflower first as it goes bad more quickly than other produce.



© Horia Varflan (Flickr)

Celery

Store celery in the **fridge** either in a container of water or in an **airtight container**.

Celery leaves can be washed, dried, and **frozen**, then crumbled into soups and stews for extra flavor.



Cereal

Store cereal in a dry place in an **airtight container**.

If cereals have gone a little soft or stale, lay them out on a cookie sheet and pop them in the oven for a bit to remove some of the excess moisture.

If you have several boxes of cereal but not enough in any one box to be worthwhile, mix them all together, blend them in a food processor, and use like breadcrumbs, as toppings for muffins or baked goods, or on ice cream!



© Horia Varlan (Flickr)

Cheese

Store cheese in wax paper, butcher paper, or parchment paper to allow it to breathe and not get moldy. Store it in a cold part of your **fridge**.

Hard and semi-hard cheeses like Parmesan, cheddar, and Swiss can be grated or cubed and kept in the **freezer**. After being in the freezer, cheese is best used in cooking.

Soft and semi-soft cheeses do not freeze well.



Cherries

Store cherries in the **fridge**.

Don't wash until ready to eat—any added moisture encourages mold. If you must wash them before storing, try using a mixture of one part white vinegar and ten parts water to help keep them from deteriorating as quickly.

Pitted and washed cherries can be stored in the **freezer** by laying them in a single layer on a cookie sheet, freezing them, and then transferring to an **airtight container**.



© judy_and_ed (Flickr)

Citrus

(Includes grapefruit, lemons, limes, oranges, etc.)

Keep citrus loose or in an open container in the **fridge**. Never store citrus in an airtight container.

If you have a cut lemon or lime, wrap the cut end in a damp paper towel.

Juice and peels can be stored in the **freezer**. Freeze juice in ice cube trays and store peels in an **airtight container** in the **freezer**.

Juice from citrus can be used to keep apples, pears, and avocados from going brown.



Coconut milk

Coconut milk can be kept in the **freezer**. Freeze it in ice cube trays then transfer cubes to an **airtight container**.



Corn

Leave husks on fresh corn and store open in the **fridge**. Eat as soon as you can, as it loses flavor and texture quickly.

Buy corn when it's in season and store it in the **freezer** by blanching, cutting from the cob, and transferring to an **airtight container**.



Cream

When storing cream in the **fridge**, don't put it in the door, because that is often warmer than other parts of the fridge, and could make it spoil more quickly.

Cream can be **frozen**.

- Lightly whip the cream before freezing to prevent it from getting grainy.
- Freeze in ice cube trays then transfer cubes to an **airtight container**.



Cucumbers

Store cucumbers in the **fridge** by standing them upright in a container of water with the stalk down.

Wrap in a moist towel in the **fridge**.



Dates

The drier varieties of dates (like Deglet Noor) can be stored out **on the counter** in a bowl or paper bag.

The more moist variety of dates (like Medjool) need to be kept in the **fridge** either in cloth or in a paper bag, keeping the moisture away from the skin of the dates.



Eggs

When storing eggs in the **fridge**, write the date you bought them on the shells or cartons to make sure to use the older ones first.

To test if an egg is still good, try dropping one in a glass of water.

If the egg...

- stays at the bottom, flat or at an angle, it is fresh.
- stands on its pointed end at the bottom, it is still safe to eat but best used for baking and making hard-boiled eggs.
- floats, it's stale and best discarded.

You can **freeze** eggs, just not in the shell. They are best if frozen in portions you will use, like in ice cube trays. If freezing whole eggs or yolks, whip up the yolk with a fork and put in tray. If freezing just yolks, to keep them from clumping, add a ½ tsp. of salt per cup of yolks or 1 tbsp. of sugar per cup of yolks. You can freeze whites as they are. Store portions in an **airtight container**.



Eggplant

Store eggplant unwashed in the crisper drawer of the **fridge**.

Eggplant doesn't like any extra moisture.

Eggplant can be peeled, blanched, cut, and **frozen** in an **airtight container**.



© Alice Henneman (Flickr)

Fennel

Place in the **fridge** in a closed container with a little water or upright in a cup of water (like celery).



Figs

Keep figs in a paper bag or on a plate in the **fridge** and away from moisture. Store in a single layer as they are very fragile.



© Emilie Hardman (Flickr)

Flours

Keep in **airtight containers** in a **cool, dark place**.

Flours, especially flours with more oils and higher protein levels (like whole wheat) last longer in the **fridge** or **freezer**.



Garlic

Store in a **cool, dark place** away from produce that gives off ethylene gas.



© Marco Bernardini (Flickr)

Try storing garlic in an old nylon stocking: place one head of garlic in the stocking, tie a knot, and add another, etc. When the stocking is filled, hang it in a cool, dark place.

Grapes

Remove spoiled or soft grapes and do not wash them before storing in the **fridge** in an **airtight container**.



Grapes can be **frozen** to use in smoothies or as a frozen treat. Freeze in a single layer on a cookie sheet, and then store the frozen grapes in an **airtight container**.

Greens, cooking

(Includes all greens generally eaten cooked: beet greens, bok choy, broccoli raab, collards, dandelion greens, kale, mustard greens, spinach,

Swiss chard, tat soi, and turnip greens)

Remove any bands, twist ties, etc.



Greens must be kept in an **airtight container** with a damp cloth to keep them from drying out.

Hardier greens like kale, collards, and chard even do well with their stems in a cup of water **on the counter** or **fridge**.

Greens, salad

(Includes all greens eaten fresh: arugula, corn mache, endive, lettuce, mizuna, radicchio, sorrel, and spinach)

Store salad greens in the **fridge** in an **airtight container** with a damp paper towel.



Soak leaves that have gone limp for 30 minutes in cold water to revive crispness.

Green onions (or Scallions)

Store in the **fridge** wrapped in a damp towel or upright in a glass of water just to cover the white parts.

Make sure to remove any bands on the bunch.

Green onions can be **frozen** to be used cooked later. Chop and freeze on a cookie sheet and store in an **airtight container**.



Herbs

Store herbs (other than basil) in the **fridge** upright in jars (stems down) filled with 1-2 inches of water.

Herbs can be **frozen** by chopping and freezing in ice cube trays full of olive oil.



Leeks

Store leeks in an open container in the crisper drawer of the **fridge** wrapped in a damp cloth or in a shallow cup of water (just so the very bottom of the leek is covered with water).



Meat, Poultry, and Fish

(Includes: bacon, beef, chicken, ham, pork, turkey)

Keep all meat in the coldest part of the **fridge**: the bottom shelf.

Fresh meat will only keep for 1-2 days in the **fridge**. If not using within 1-2 days, **freeze** in an **airtight container**.

Freeze individual portions or strips of bacon between wax paper and in an **airtight container**.

Keep raw meat, poultry, or fish in the **freezer** and thaw it out in the fridge a day or two before you will cook it.

Cooked meat can keep up to 4-5 days in the **fridge**.

Keep bones and carcasses to make soup or stock. Keep them in the **freezer** to use later.



Melons

Store in a **cool, dry place** out of the sun.

Once ripe, store melons in the **fridge**.

Cubed melon can be **frozen** on trays before transferring to an **airtight container**, and then used in drinks and smoothies.



Milk

When storing milk in the **fridge**, don't put it in the door, because that is often warmer than other parts of the fridge, and could make it spoil more quickly.

Skim or low fat milk can be **frozen** in glass jars. It may be better used in baking than for drinking because it often separates. Be sure to leave room in the jar for the milk to expand.



Mushrooms

Keep mushrooms in a paper bag in the **fridge** to avoid getting "slimy."

Mushrooms can be sautéed and then **frozen**.



Nuts

Nuts can be stored in the **freezer, fridge**, or a **cool, dry place**. They will last longer in a colder place.

Nuts take on other flavors easily, so store away from high-odor foods.

Nut butters should be stored in the **fridge** to extend shelf life.



© s58y (Flickr)

Oils

Store oils in a **cool, dark place** in a glass, ceramic or non-reactive metal container (like stainless steel). Keep away from your stove or any warm place.

If you keep oil in a dark basement, you may want to keep a small, opaque container of oil in in your kitchen for easy access.



Okra

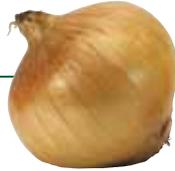
Okra doesn't like humidity. Store with a dry towel in an **airtight container**. Eat as soon as you can after purchasing, as it doesn't last as long as other produce.



© avlyz (Flickr)

Onions

Store whole onions in a **cool, dark place** somewhere slightly warmer than the fridge. Good air circulation is best, so don't stack them.



© Dubravko Sori (Flickr)

Try storing onions in an old nylon stocking: place one in the stocking, tie a knot, and add another, etc. When the stocking is filled, hang it in a cool dark place.

Store partially used onions in the **fridge** in an **airtight container**, leaving the papery outer layer on.

Onions cause potatoes to sprout, so keep them separate.

Pasta

Store dry pasta in an **airtight container**.

Cooked pasta can be **frozen** in individual- or meal-sized portions.



Pears

Store pears in the **fridge** to extend shelf life.

Fruits that are overripe or damaged can still be used in sauces or baked goods if you do not want to freeze them. Look up recipes in your cookbooks or online.



© Joe King (Flickr)

Peas

Keep peas in the **fridge** in an **airtight container**.

Fresh peas (snap or shell) can be blanched and **frozen** in an **airtight container**. Freeze them on a cookie sheet first before transferring to a container to avoid sticking.



© Dave Gunn (Flickr)

Peppers: red, green, or hot

Only wash peppers right before eating them.

Partially-eaten peppers can be stored in the **fridge** with the seeds and stems attached to extend shelf life.

Peppers can be **frozen**, either raw or blanched, to be used later for cooking.



© Paul Goyette (Flickr)

Persimmon

Store at room temperature until ripe (Fuyu will still be firm, Hachiya will be mushy) and then store in the **fridge**.



© Koshy Koshy (Flickr)

To hasten the ripening process, place in a paper bag with a few apples. Don't stack them, as they get very fragile when ripe.

Pomegranates

You can store pomegranates **on a cool counter**, but they will keep longer in an open container in the **fridge**.



© sarawestermark (Flickr)

Potatoes

Store potatoes in a **cool, dark place** somewhere slightly warmer than the fridge. A box in a dark corner of the pantry or a paper bag work well.

Moisture and exposure to light causes spoilage.

Onions cause potatoes to sprout. They're still good to eat—just cut off the sprouts and eyes.

While apples cause most produce to spoil, apples can help keep potatoes from sprouting, so you may want to store them together in a cool place for long-term storage.

Cooked and mashed potatoes can be **frozen** to eat later.



© Brian Hoffman (Flickr)

Rhubarb

Wrap in a damp towel and place in an open container in the **fridge**.



Rice

Store dry rice in an **airtight container**.

Cooked rice can be **frozen** in an **airtight container**.



Root vegetables

(Includes celery root/celeriac, parsnips, radishes, rutabagas, turnips)

Remove any greens and store separately (see Greens, cooking). Greens from some root vegetables such as turnips and radishes are edible and delicious when cooked.



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Store in a **cool, dark**, humid root cellar or in an **airtight container** with a damp towel in the **fridge**.

Squash

(Includes acorn, butternut, pumpkins, and all thick-skinned squash that are often categorized as "winter squash")



Store in a **cool, dark, well ventilated place**. Many growers say winter squashes get sweeter if they're stored for a week or so before eaten.

Stone fruit

(Includes peaches, plums, nectarines, and apricots. Cherries are exception: see "Cherries")



© Thomas Hawk (Flickr)

Store in a cool place out of the sun until ripe.

Once ripe, store open in the **fridge**.

Stone fruit can be **frozen**—peeled or unpeeled. Cut and freeze on a cookie sheet then put in an **airtight container**.

Sweet potatoes

Store in a **cool, dark, well ventilated place**. Never refrigerate—sweet potatoes don't like the cold.



Tomatoes

Tomatoes can be **frozen** either raw or cooked.

Tomatoes should be stored **on the counter** unless very ripe, at which point transfer them to the **fridge**.



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Tomatoes give off ethylene gas that causes other produce to deteriorate, so store them separately.

To hasten ripeness, place them in a paper bag with an apple.

Zucchini

(Includes patty-pan, yellow squash, and all thin skinned squash varieties often categorized as "summer squash")

Wrap whole or cut ends in a damp cloth and keep in the **fridge**.



Zucchini can be **frozen** either blanched or raw. Store in an **airtight container**.

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