



From Farm to Fridge Workshop Overview

The Goals of this Workshop are:

1. To emphasize the environmental and financial benefits of eating foods closer to home
2. To identify some of the important health and environmental issues associated with food that travels far
3. To encourage group discussion about experiences with local products, and share stories or recipes for local food.

The Workshop Audience

The presentation can be given to a group of up to 30 people, dependant upon the supplies available for the activity and your comfort with managing/presenting to large groups. Ideal audiences include community groups, families, women's or men's clubs, and event gatherings with a green focus. The information it covers is very practical and therefore the presentation also lends itself well to a 'lunch-n-learn' type of audience.

Location and Time

This workshop is best held indoors in a room with a computer, a projector, and a screen. It is best to have participants seated so they can view the screen and the presenter. You may wish to set up an extra table in advance of the presentation for the activity supplies.

Dependant upon the length of the informational PowerPoint you develop, you will likely want to budget 1 hour for the workshop, as the activity alone takes about 20 minutes. The workshop facilitator should manage their speed of presentation and group discussion to meet the time requirements.

Presentation Materials

1. PowerPoint Presentation

OSA has developed the 'From Farm to Fridge' power point. Ideally this presentation would focus on the benefits of local food and briefly discuss some of the health and

environmental concerns surrounding food. We encourage you to use and adapt the presentation to your needs.

2. One Simple Act Commitment Cards

Once the workshop is complete, ask each participant to make a personal commitment to utilize their green cleaner. Alternately, inform participants that they may choose any other action on the back of the commitment card. Be sure to stress that they must choose an action that they are prepared to tackle; something they will *actually* do, not just something they will think about. Once a simple action has been chosen, the individual will write out their commitment on a One Simple Act commitment form and sign their name. Research has shown that when someone writes down and signs their name to something, they are more likely to follow through with it¹.



I commit to one simple act...

I will

signature (first name only)

www.onesimpleact.alberta.ca Alberta

3. Workshop Evaluation Form

Have each participant complete and return an evaluation form (provided in this document). It is useful to have a large envelope for participants to place their completed sheets into before they leave (rather than giving them directly to the presenter). Though this workshop generally receives a great degree of positive feedback, it is always helpful to get constructive criticism to improve the workshop in the future. Therefore, placing evaluation forms in an envelope allows for participant anonymity and increases the likelihood for useful improvement tips.

Workshop Delivery Tips

1. As with any presentation, being flexible and adaptable is important. Do not be put off if the number of participants is less than you had expected. As you deliver the presentation, read your audience's comprehension level. If the audience is looking lost or bored, adapt your presentation style, language, and energy level.

¹ <http://www.cbsm.com/public/world.lasso>, accessed February 4, 2010.

2. It is often valuable to begin the workshop by having everyone introduce themselves and share any experiences with local food. This will create a dialogue and encourage participants to ask questions and comment throughout the workshop.
3. Monitor group conversation. Be conscious of timing, but also try to allow space for conversations which add value to the workshop. Participants will learn more if they feel involved, and have been given the opportunity to share their own stories.



From Farm to Fridge Workshop Lesson Plan

Target audience: adults, those who are in charge of grocery shopping in their household

Setting: Preferably indoors in a room with tables, chairs, and a projector

Time required: 1 hour +

Learning objectives:

1. Understand the environmental implications of food production, processing, and transportation
2. Provide a checklist to help people reduce the impact of their food consumption routines

Materials:

- Meal maker cards
- Compost pamphlets
- Reusable grocery / produce bags
- Calculator
- PowerPoint presentation

Background information and resources: Please review the From Farm to Fridge Resource Package.

Find information about the community beforehand:

- ⇒ What sort of recycling or composting facilities they have in the community
- ⇒ When and where is the farmer's market?
- ⇒ Is there a CSA established?
- ⇒ What are the grocery store options in the community?
- ⇒ Is the community known for a certain agricultural product?

Outline: Introductions
 Meal maker activity
 How to shop for groceries
 Conclusions

PowerPoint Script

Introduction (Slide 1)

My name is _____ I am with _____. *(Please give a brief introduction and tell the audience about yourself)*

In this Farm to Fridge workshop we will explore some the choices we can make around the food we buy and provide information on how we can reduce our environmental impact by the way we shop and eat.

The workshop will take approximately 1 hour. We will start with an activity that will help us understand the impacts of food production and transportation. Afterwards, we will provide you with a checklist to help you make environmentally conscious shopping decisions. Not every action on the checklist will be right for you. It's about finding a balance between what you need and what you're willing to do. We are not here to tell how to eat; we're simply providing information and tips so that you are able to make informed choices.

Before we get started, I would like to learn a little about you and why you have come to this workshop. I will start. *(Give some details about yourself)*. Now it's your turn, please tell us your name and one thing you are hoping to get out of today.

Meal Maker Activity (refer to the Resource Package for activity resources)

The very first thing I'm going to have everyone do is some grocery shopping. Please come up and make a meal by picking five items, one from each food category.

Lay out the food item cards on a table in their food groups. They are classified in 5 "food groups" (fruits, vegetables, meat, grain, and others). Have each person make a meal by selecting a food items from each food group. Make sure they do not open the envelopes. Have them take their seat again with their meal.

You've just gone grocery shopping and it probably seemed pretty simple but a lot of work goes into our food behind the scenes before it ever reaches our table. If we take responsibility for the impacts of the production, packaging, processing, transportation, and handling of our food, consuming food is one of our most polluting daily activities. As we go through, you will see why. However, not all foods are equal, and neither are their impacts on our environment, which means that your choices can make a difference.

Food miles (Slide change)

Has anyone heard of the term food miles before?

Food miles are the distance food travels from where it is grown to where it is ultimately purchased or consumed by the end user. Much of the food we eat is more traveled than we are. In fact, the average food item traveled just over 2,000 km to reach us. (California is about 2000 km away). This can have a lot of implications.

What are some benefits about having food from around the world?

- We have lots of choices when we go the grocery store
- We can eat ethnically diverse food
- We can enjoy fruit and vegetables in the winter

These are all very important aspects, however transportation adds to air pollution, requires energy, and contributes to climate change. Earlier we asked you to consider how you got to the grocery store. Now we also want you to consider how the food got there.

Have everyone pull out the first insert in each of their envelopes. These cards indicate the origin of each food item and distance to that location. Ask each person to tally up their total food miles.

How far did your food for this meal travel? *Find out who had the most and the least*

If you had a meal made of entirely exotic foods, the total food miles of your meal could add up to 50 000 km. An average meal would add up to about 10 000 km of transportation. If you had all local foods, the food miles of your meal would add up to about 500 km. (Choosing to eat locally would require 9 500 less km than the average meal. Meanwhile, feasting on exotic foods would require 40 000 more km of transportation)

What items were the big culprits? Could that item be grown locally?

Food miles are a good indicator of the transportation requirement of a product. However, it's important to understand that this does not translate directly to environmental impact or carbon emissions for two reasons; the first being that not forms of transportation are equal.

(Slide change) For example, air transport produces the most greenhouse gases but very few food products are shipped by air. Sea freight is a much more efficient and common means of travel. The emissions produced in truck transportation vary dependant on load size and vehicle type. Considering this, it is likely that bananas flown from Mexico would produce more greenhouse gases than Kiwis shipped by boat from New Zealand. Unfortunately, it's not that simple.

The second reason is that transportation represents only a small portion of the greenhouse gas emission of food products (about 11%). As such, food miles cannot alone indicate which foods are most environmentally friendly.

(Slide change) Consider a tomato grown in California, another grown near Edmonton in a greenhouse, and third grown in a garden near Edmonton. This example demonstrates how heating and/or cold protection technologies for production can require greater energy what is associated with the transportation of those products from further locations. So while eating locally can be beneficial, it must be food that can be grown locally in that season.

Fertilizer

As I mentioned, transportation of food is only a small part of the puzzle. Producing food requires the most energy. In fact, production of food contributes about 80% of the greenhouse gas emissions associated with the items. The aspect of food production that requires the most energy is fertilizer production.

(Slide change) There are various different types of fertilizer but the dominant one is nitrogen. At first this doesn't seem like a problem because there is nitrogen everywhere, our atmosphere is 78% nitrogen after all. But the nitrogen in the atmosphere is in the form of N_2 . The kind of nitrogen that plants need to grow is NH_3 (ammonia).

In nature, this transformation results from lightning; a bolt of lightning has enough energy to fuse these molecules together. Unfortunately, this doesn't happen very often. The second way depends on bacteria in the soil but the natural fertility of our soils has been depleted due to intensive farming. Using pesticides decreases the ability of these soil bacteria to fix the much needed nitrogen and make us dependant on commercially produced fertilizers.

The way that commercial fertilizers are produced is more like the lightning bolt situation. We create our own ammonia to make fertilizer and it takes A LOT of energy! **(Slide Change)** The production of a kilogram of N requires about 60 mega joules of energy. For comparison, a liter of diesel fuel has an energy content of about 37 mega joule. That is why fertilizer is called the fossil fuel of food.

Let's take a look at how much fertilizer is used to grow our food.

Have everyone pull out the second card in their envelope (with green drops on it). The number refers to the rate of fertilization used on these crops (Kg/Hectare), not an exact amount needed to produce that item.

Looking at you cards, what food items use the most fertilizer? *Find the person who has beef.* How many drops of fertilizer are on your beef card? And how many on your grain card?

(Slide Change) Now obviously we don't spray cattle with fertilizer. The fertilizer needed to produce meat results from the fertilizers used on grain crops to feed the animal. But look at

your grain card, they don't require much fertilizer. The total amount required is dependant on that animal's FCR (Feed Conversion Ratio, in other words: the number of kg of feed that an animal must consume to produce a kg of meat). Cattle have a FCR of 10:1. If you eat 1 kg of beef, it would require 10 times as much fertilizer compared to if you eat 1kg of grain, because the cow had to eat 10 kg of grain to produce 1 kg of beef.

Who has pork? How about chicken? Pigs have an FCR of 4:1, chicken are 2:1. So they don't require as much feed and therefore fertilizer to produce the same amount of meat. (The FCR for salmon is 1.1:1, but this really is only relevant in fish farms where fish are being fed)

(Slide change) The end result is that the production of red meat creates about 150 per cent more green house gases than the production of chicken or fish. You can see that choosing certain food over others can greatly reduce the amount of fertilizer, energy, pollution, and carbon emissions that your food creates.

It's important to remember that these numbers are averages and the actual fertilizer used on any given drop depends on climate, soils, and farm practices. In fact, one example of farm practices that reduce the fertilizers is organic farming.

Organic agriculture refers to a farming system which bans the use of chemicals such as synthetic fertilizers and pesticides and the use of GMOs. Instead, soil fertility is enhanced by crop rotation, intercropping, and mulching. If you purchase organic beef, the crops used to feed the cattle would not require fertilizer nor produce that same amount of greenhouse gases.

Organic agriculture is also beneficial because it increases biodiversity, decreases soil erosion. However, national and international trade of organic products has resulted in increased transportation. This is especially true in Canada where much of the organic produce available is imported. So there is a trade off unless you are purchasing organic products from a local source.

Water (Slide change)

So we talked about fertilizers, but plants also need fresh water. We need water to live and to grow our food. Unfortunately, we are using water at an unsustainable rate. In many places, groundwater and streams are over exploited and river basins are being depleted. Agriculture is the largest human use of water. Conserving our water resource means ensuring food for the future.

Let's take a look at how much water our food requires. *Get everyone to pull out the last card from their envelopes (the cards with the blue drops). The number indicated refers to how much water is used to produce the food item in L/kg of food.*

Looking at you cards, what foods do you think require the most water? (*Beef*)
According to you card, how much does it take to produce 1 kg of beef?

Why do you think that beef production uses so much water?

Yes, it all comes back to the FCR of cattle. Cows must eat 10kg of grain to make 1kg beef. So, eating beef requires about 10 times the water require to produce the same amount of grain.

You can see from these examples that choosing certain foods over others can also significantly reduce the amount of water required to make your food. Keep in mind that these numbers are averages and that the actual water requirement of a food varies widely depending on climate, soils, and farm practices. For example, if this cow grazed on native prairie grass species in a native pasture that wasn't irrigated, its water requirements would be very different.

Looking at water and fertilizer, meat products are the greatest contributors to greenhouse gases and water use. In Canada we love meat. On average, we consume almost double what is recommended by the Canada Food Guide.

While a vegetarian diet is ideal, the most significant environmental benefits can be achieved by simply reducing red meat consumption. In fact, one study found that shifting only one day per week's worth of calories from conventional red meat to chicken, fish, eggs, or a vegetable-based diet achieves more greenhouse gas reduction than buying all locally grown food.

How to Shop for Groceries (Slide change)

Right about now, you're probably feeling a littler overwhelmed thinking about all things you need to consider when you head out for groceries next. So we will look at exactly what it is that you can do to make environmentally friendly choices.

After today's workshop we will collect your email addresses and will send you our checklist, with tips and resources to help you follow through with the actions. Right now we will work through the checklist with you.

Prevent food waste (Slide change)

When you fail to plan, you plan to fail! About one quarter of our household waste is composed of organic food waste (*In Edmonton, it's 23%*). Its been shown that more than half of this food waste, which consists mostly of fresh fruits and vegetables could be avoided with better shopping and meal planning. When food is wasted, so are the energy and resources that went into its production and transportation.

(Slide change)

One of the resources that we will send you is a link to www.lovefoodhatewaste.com. This is a website with loads of information on meal planning and preventing food waste.

What are some ways that you can prevent food waste?

(Slide change)

-Decide what meals you'll eat for the next week before you go grocery, make your shopping list accordingly. This website has recipes with their shopping list attached. Create a grocery list for recipes that you use often. Meal planning can be as easy as pulling out seven recipes cards.

(Slide change – 4 slides)

-Cook appropriate portions. This website also has a portion planner that can eliminate guesswork. You select the food, and enter the number of adults and children served. It tells you how much to cook and how to measure it.

(Slide change – 2 slides)

-Use your leftovers, and do it with style so that you can enjoy it. Sunday is a perhaps day for a roast chicken, beef, or pork. The leftover are great for sandwiches, salads, or even quesadillas. At this website, you can find recipes based on the ingredients you want to use up. You can also find "cook once, eat twice" recipes.

(Slide change – 2 slides)

-Store your food properly. This website has information on the best storage techniques for various different kinds of foods.

Reusable bags (Slide change)

Question: On average, how many plastic bags do you think we use in Canada every minute?

Answers: A. 700 B. 7,000 C. 17,000 (Answer is C. 17,000)

Plastic bags are made from non-renewable fossil fuels. Approximately nine plastic bags contain enough embodied petroleum energy to drive an average car one kilometer. If everyone in Canada switched from single-use plastic shopping bags to reusable ones, we would save the amount of fuel used by 56 753 cars each year.

Most people have reusable grocery bags these days; the hard part is remembering them. How do you make sure to remember your bag?

- Write it on your shopping list
- Store it in your car
- Hang it on your door knob

Don't forget your reusable produce bag!

Walk to store (Slide change)

Our own transportation to the grocery store also has a big impact. To make matters worse, both the number of trips people make to the grocery store each week, and the distance they travel to the store has been increasing. Each Canadian makes an average of 2,000 car trips of less than 3 km each year. These are trips that could easily be replaced with a better form of transportation.

Choosing to walk, bike, or take public transportation can reduce the emissions associated with your food. If this isn't an option, stop at the grocery store on your way home from work instead of making a separate trip. You should already know what you need since you'll be planning your meals ahead of time and your reusable bags should be in your car.

Reduce packaging (Slide change)

In Canada, packaging makes up a large portion of the waste going into landfills. To reduce packaging waste, purchase unpackaged produce, and bulk items. If packaging is unavoidable, choose packaging that can be recycled or is made from recycled materials. For example, eggs come in crates made of Styrofoam, recycled carton, and plastic. What do you think is the best option?

Look for fruits and vegetables that are not pre-packaged and use your reusable produce bags. Many items require packaging such as cereal, dairy products and meats. When packaging is unavoidable look for packaging made from recycled materials or that is recyclable. Purchasing non-perishable items in bulk can also reduce packaging.

Processing

These days, the majority of the food we consume has been processed in some way. A product is less environmentally friendly if it is preprocessed or frozen because these techniques are energy intensive. Such products include frozen dinners and ready-prepared fruits and vegetables which are processed and frozen, then remain frozen during transport and storage. (Consider triple washed vegetables)

Shop the outer edge of the grocery store. This is where you will find fresh produce, dairy, and meats which have had little or no processing. Avoid frozen ready-made meals and ingredients that you cannot pronounce.

Eating locally, seasonally and organically

We discussed some of the pitfalls of food miles, however, eating locally is definitely valuable when it means that you're buying foods that are seasonally available in your region, that are being grown in your region.

Purchase from local farmers (Slide change)

The best place to get locally grown seasonal food is at your local farmer's market. This also allows you to purchase directly from the producer, which means that you can ask about how it was produced and support your local economy.

In your package we will include a link to <http://www.albertafarmfresh.com>. This website will help you find local u-pick berry farms, and producers. It also has information on which vegetables are available when. It has pretty much everything you need to know to eat locally in Alberta.

(Slide change) By selecting the 'Google Mapping' tab, **(Slide change)** you can select your region, the type of local food you are looking for (fruit, veggies, protein, etc,) and then the map will show you the locations near you.

Local producers are often also a great source of organic food. Much of the food at a farmers market is organic whether it is certified or not.

Local seasonal food can be limited during the winter and spring months. If you know how to can and pickle or you freeze foods, food you purchase from the farmer's market may last you into the winter. Hearty vegetables such as cabbage, beets, and turnips will also last into the winter without spoiling. Meat products can also easily be frozen and stored. However, if you desire a wider variety of fresh produce than this, you will have to return to the grocery store.

Organic foods (Slide change)

While, eating local produce during the winter months can be challenging, you can still purchase organic food in your grocery store.

You may find many organic logos in grocery stores. Some companies create their own logos while other foods have American organic logos. Starting June 2009, American companies will be able to use a Canadian organic logo to market organic items that they export to Canada. The idea is to standardize organic labeling. In Canada, foods that are at least 95% certified organic will have this logo.

(Slide change) Another reason people choose organically grown food is for health reasons. According to the U.S. Food and Drug Agency (FDA), approximately 35% of purchased foods have detectable pesticide residues, with one to eight percent of these with levels above the legal limit. In your package, we will provide a list of produce items that typically have pesticide residue on them. This can help you determine what items you want to purchase organically.

Choosing meat (Slide change)

As we saw in our meal maker activity, meat, in particular beef, can have some of the greatest impacts. So how should we go about eating meat? First, we suggest that you follow the Canadian Food Guide's recommendations and limit your meat consumption to the suggested number of servings. Some of these should be meat alternatives such as eggs.

One way to reduce the impact of your eating would be to select chicken or pork over beef because they require fewer resources. This may be the best option in the grocery store however; remember that Alberta Beef is an important part of our economy. The best way to purchase meat while supporting local producers and our environment is to buy grass fed or organic beef from local producers.

(Slide change) Another tool that we will include in your package to help you choose meat is this seafood watch wallet guide. It had a list of fish types that you should avoid, and ones that you should buy based on the endangered status of the species.

Be your own producer (Slide change)

Since the most environmentally friendly food is seasonal produce that does not require heating or cooling, travels short distances with no packaging, and doesn't require processing, planting a garden can be the most environmentally friendly way of getting your food.

If you do not have your own back yard, you can join a community garden. In a community garden you can rent a plot small to grow your own vegetables. Most gardens are operated in partnership with a not-for-profit entity such as a municipal department, social service agency, church or co-operative housing complex. In the package, we will include links to help you find a community garden in your neighborhood.

Conclusion (Slide change)

Use this time to have people reflect on what they've learned, changes they might make, or share any others ideas that they have about food.

- From the ideas discussed today, do you think you'll make changes to the way you eat?
- What are your biggest concerns or obstacles to making changes?
- Was there anything you learned today that surprised you?

Commitments (Slide change)

Ask each individual to select one commitment (associated with workshops learnings) that they can do to make their grocery shopping more environmentally friendly.

EVALUATION QUESTIONNAIRE

Please reflect on this workshop and let us know what worked well and what needs improvement. Your input will help us enhance future workshops and resources. Your individual responses are confidential.

EVENT INFORMATION

Workshop Name: _____ **Facilitator(s)** _____
Workshop Location: _____ **Date:** _____

OVERALL ASSESSMENT

1. Please indicate your overall assessment of the workshop.

- Very Effective
 Effective
 Somewhat Effective
 Definitely Not Effective

WORKSHOP OVERVIEW

Please check the best measures your level of agreement with the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable
<u>Workshop Content</u>					
The workshop objectives were clear to me.					
This workshop lived up to my expectations.					
The content is useful/applicable to me.					
<u>Workshop Design</u>					
The workshop activities stimulated my learning.					
The difficulty level of this workshop was appropriate.					
The pace of this workshop was appropriate.					
<u>Workshop Facilitator(s)</u>					
The instructor(s) was well prepared.					
The instructor (s) was helpful.					
<u>Workshop Results</u>					
I will be able to use what I learned in this workshop.					
I believe the goals of the workshop were met.					

2. Which topics or aspects of the workshop did you find most interesting or useful?

3. How will you apply what you learned at this workshop? Please complete the following statement:

As a result of this workshop, I intend to:

4. Please tell us how we could make this workshop more effective. Please tell us what topics you would like more information on and share other comments you may have.

BUILDING THE MOVEMENT

5. How would you like to continue your engagement with *One Simple Act*? Please check all items that interest you.

- Add my email to the *One Simple Act* electronic newsletter
- I would like to share my progress with *One Simple Act*. Please contact me by phone or email within six months to learn how I used the information from this workshop.

Name: _____ Phone _____

Email: _____

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