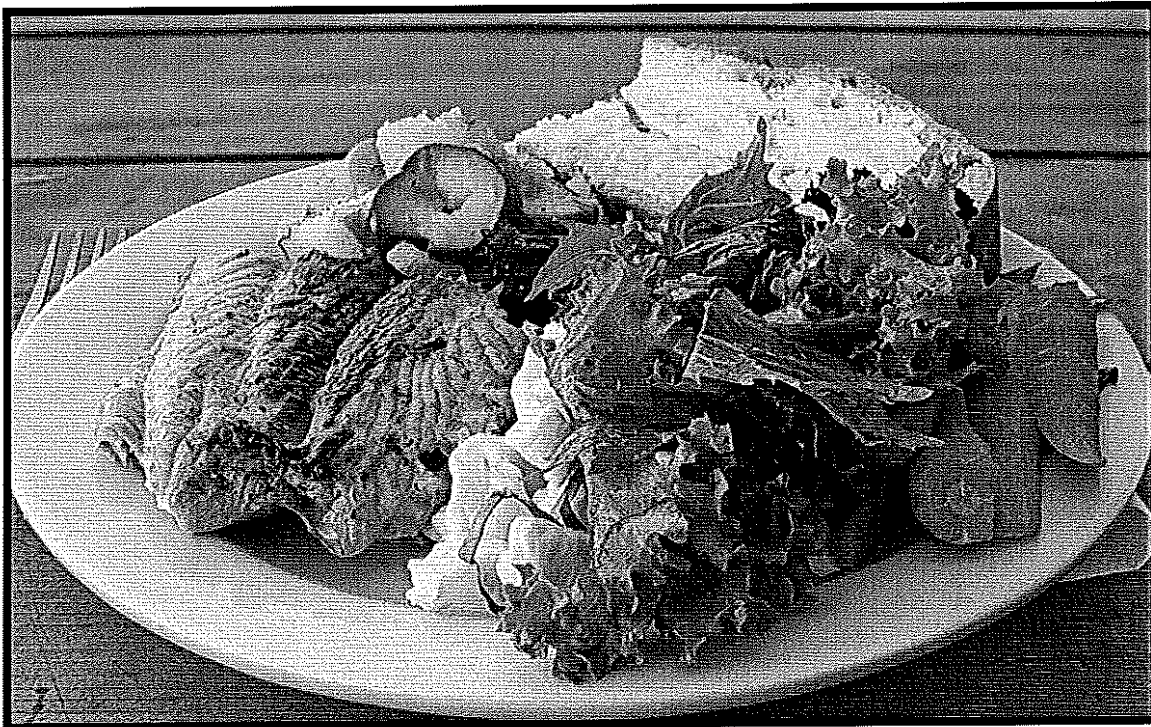


Think Global, Eat Local

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British Columbia Agriculture
in the Classroom Foundation
Summer Institute 2002 Unit Plan
for Food Studies 11/12



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Participants (20 educators from Kindergarten to Grade 12) spend one week at the Montfort House Rural Resource Centre situated on UBC's Farm on Vancouver Island. Here they develop a number of practical teaching strategies for their classrooms using examples drawn from the agricultural, environmental, economic and nutritional concepts featured in the Bc Integrated Resource Packages for their particular grade or subject area.

The agricultural community sponsors participants for the costs of learning resources, tuition, meals and accommodation.

Participants taking the course for credit create teaching modules such as this to share with other educators from around the province.

Applications can be made on the BC AITC web site at www.aitc.ca/bc or directly at the AITC office. Contact Lindsay Babineau at 604-556-3088 for an application form.

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Table of Contents

| | | |
|--|----|---|
| Introduction | 3 | |
| Timeline | | 3 |
| Curriculum Outcomes | 4 | |
| Lesson 1 | 5 | |
| What Food? | 6 | |
| Lesson 2 | 7 | |
| Sample Menu | 8 | |
| Lesson 3 | 9 | |
| Lesson 4 | 10 | |
| Jeopardy | 11 | |
| References | 12 | |
| Appendix A: 10 Reasons to Buy Local Food | 13 | |
| Appendix B: North American Consumption Patterns Contributing to Global Patterns | 14 | |
| Appendix C: Bringing the Food Economy Home | 15 | |

Introduction

We don't just want to learn about the importance of supporting and buying local food, we want to actively encourage others to do the same. We are going to produce a cookbook that highlights the use of local foods and shares information about the benefits of eating local!

The Cook Book Context:

I think that one of the most valuable assignments I give my Foods 11 and 12 classes is The Cook Book. They are required to keep every recipe they use during the semester. Each student has a folder which we keep in the foods room and they keep adding to as I give them new recipes. Sometimes every group of students in the class will be preparing different recipes – we make sure everyone gets to share their recipe with others and contribute to our growing cook book. As long as the recipes are kept together it seems to be something they value and take home with them at the end of the course, rather than throw out each single recipe page along the way.

The Cook Book gives students a collection of recipes that they know how to prepare, and that they have ideas about for possible adjustments to their likes and dislikes. For some students the course is an introduction to a huge variety of foods they have never tasted or tried cooking before.

Often students who aren't taking my class will ask me for the recipes for food their friends shared with them. This is how I got started thinking about making a cook book specifically to share with the rest of the school.

Eat Local:

I will not explain, here in the introduction, why buying local food is so important or why I think it is *the* most important issue we could choose to focus on. I think you will find the answers to those questions throughout the unit and you will discover even more about the issue as you tackle this subject with your students.

Most Farmer's markets that I know of are held only once a week on a Saturday or Sunday. For the purposes of this unit I'm going to assume that many people around the province deal with the same limitations. Check out www.bcfarmersmarket.org to find out if there is a market in your area and when it is open. Hopefully the ideas I've used for my local community will translate easily to your own. Only a few parts of this unit are specific to the Comox Valley; I've included them as ideas and inspiration to get you started on your own.

Timeline

| | | |
|-----------|--|----------|
| Saturday | Shopping at the Farmer's Market | |
| Monday | Food Display and Selection, Introductory Discussion | Lesson 1 |
| Tuesday | Recipe Demonstration, Menu Discussion | Lesson 2 |
| Wednesday | Recipe Lab | |
| Thursday | Recipe Search, Menu Creation | |
| Friday | Recipe Search, Menu Creation | |
| Saturday | Shopping at the Farmer's market – invite students to join you! | |
| Monday | 10 Reasons to Buy Local Food | Lesson 3 |
| Tuesday | Preparation of Food | |
| Wednesday | Final Steps of Preparation, Eating and Sharing (cookbooks completed for sharing) | |
| Thursday | Jeopardy Game creation | Lesson 4 |

Curriculum Outcomes

Home Economics courses offered at the secondary level become more specialized. Although content may be specific to the study of food preparation and service, textile production and use, or human growth and development throughout the lifecycle, there is a continued focus on meeting the needs and wants of individuals and families in a responsible manner. Courses at this level support career exploration and preparation by encouraging each student to acquire a broad base of knowledge as a useful background for specific training or further education to support a future career.

In grades 11 and 12, students:

- Acquire skills and knowledge appropriate to the area of study
- Investigate job and career opportunities in related industries
- Analyse and evaluate strategies and products
- Describe or use appropriate technology for completion of projects and home and in the industry
- Consider global implications of decision making
- Use appropriate skills for enhancing interpersonal relationships at home and in the workplace

(from the Home Economics K to 12 Overview, BC Ministry of Education)

Selected Food Studies 11 and 12 Prescribed Learning Outcomes:

Food Preparation Principles

It is expected that students will:

- demonstrate the effective use of time
- display a willingness to work co-operatively with others

Food Preparation Techniques

It is expected that students will:

- demonstrate a variety of food-preparation techniques
- adapt ingredients and methods to create original recipes

Food Products

It is expected that students will:

- demonstrate an appreciation of the aesthetic and social aspects of food
- establish criteria for evaluating food products and meals

Nutritional Issues

It is expected that students will:

- identify nutritional issues and describe their effects on well-being
- critique the production, composition and consumption of commercial food products

Social and Economics Issues

It is expected that students will:

- identify environmental and health issues related to the production and consumption of food
- analyse the effect of food-marketing practices on consumer behaviour
- identify factors that affect the food supply
- demonstrate an ability to manage food resources in various situations
- identify and evaluate career opportunities in the food industry

Lesson 1:

Purpose

Find out what local foods are available in your community and try to get an idea of your students food habits and local knowledge.

Objectives

Students will:

- Choose a food item as their starting point for this unit
- Start to relate their food choices to local availability

Materials

- Food and notes from the Farmer's Market
- 30 copies of What Food? (Discussion Organizer)

Procedure

Go to your local farmer's market and make a list of all the products available locally grow, raised, or caught. They might even have a list for you, but you are going to want to know what is available right now. If you are lucky enough to have a local grocery store that strongly supports and LABELS local products then go ahead and shop there instead. I know most of the stores around me are hopeless at labeling the origins of the food they sell. Have you seen the signs: "Source: Canada/USA"? – how ridiculous!

Buy items – one for each pair of students in your class plus one for your demonstration. If you choose your own recipe ahead of time then be sure to also purchase any other ingredients you need for it's preparation. Try to choose items that will stay fresh for a full week. You're going back to the farmer's market to complete the project next weekend.

Before class: Set up a display that students will notice as they come into the classroom.

Classroom activities: Without much explanation at this point, ask students to choose a partner they can work with for the next two weeks. Each pair of students will select a food from the choices in the display. This food item will be used as a starting point for their menu and recipes. Make sure you record who is working together and what food item they have chosen. An easy way to set up the selection is to list the foods on a nearby chalk board and ask students to write their names next to their chosen food.

What Food? Before discussing as a group, lead students through this organization. Ask questions and give examples to clarify and expand on the written questions. For Example: the first question, where do you get your food from? Add verbally: What stores do you shop at? What restaurants do you go to? Do you shop at any of the local market stands? Etc... Help students finish the last few questions with your notes from the Farmer's Market. Once you've been through each question ask students to share with their partner and group members to help each other make their lists as complete as possible.

Explain the plan for the next week and how students will be using their selected food items – demonstration example, cooking lab, menu selection and style, cookbook creation with reasons for buying local and our menus (don't mention the jeopardy game yet).
I usually find it quite useful to write the timeline on one of our chalk boards.

Evaluation

- Collect and read written responses on What Food?
- Record student discussion participation with your usual lab and participation marks.

Reflection

- How might student responses on What Food? affect plans for the next few lessons?
- Did the learning involve individual and group processes?

What Food? Organizing for discussion

Where do you get your **food**?

What **foods** do you (or your family) buy?

Where does your **food** grow?

How does your **food** get from the farm to the store?

What **foods** can we buy that are grown locally?

What time of year are each of these **foods** available?

What **foods** are available right now?

Lesson 2:

Purpose

Demonstrate sample menu and start students on the search for their own.

Objectives

Students will:

Reproduce sample recipe focusing on local foods

Participate in menu discussion and construct their menu based on their selected food item

Materials

Ingredients for recipe

30 copies of your Sample Menu

Procedure

Day 1: Show and explain sample menu. Demonstrate sample recipe.

Day 2: Students prepare sample recipe. Determine criteria for evaluation with students.

Day 3 & 4: Book computer lab or library for recipe search and menu creation.

Make sure your sample is clearly laid out so that students have a model to work from. If you don't mind a cookbook with many different recipe formats and layouts then don't worry too much. I like to have a style and format in mind so that the book will end up looking consistent and professional. Rather than listing students names on their recipe pages it will look more professional if you have a "Contributors" page. List the students names in alphabetical order with the names of their recipes listed beside.

If you start with criteria categories and a clear explanation of your expectations for this assignment it will be easier for students to define specific guidelines for evaluation.

Content...for example: students will be able to suggest local food requirements, number of recipes, etc.

Layout... Group Participation... Other criteria categories...

You should end up with at least a dozen menus (3-5 dozen recipes) for the cookbook. Have students save their work all onto the same disk – just circulate the disk around the computer lab. Or you could even have students email their menu to you. If you've given clear instructions and monitored student work along the way it shouldn't be much work at the end to compile the menus to one file. If you're not computer savvy get a student to help you.

This is the format I would use for the Cookbook:

Cover Page

Table of Contents

10 Reasons to Buy Local Food

Menu 1 (list actual recipe titles or ask students to have a name for their menu)

Menu 2

Menu 3

Etc..

Contributors

Evaluation

Lab observations as per your normal routine.

Develop Criteria with your students for evaluating their menus and contributions to the cookbook

Reflection

Did the learning require the active participation of the student?

Sample Menu

Salmon Cakes

250 g cooked or canned salmon (1/2 lb)
60 mL dry bread crumbs (1/4 cup)
salt and pepper to taste
2 green onions, chopped
1 small potato, grated
1 egg
15-30 mL vegetable oil (1-2 tbsp)

In a medium bowl stir together salmon, bread crumbs, salt and pepper, green onions, potato and egg with a fork until well mixed. Divide mixture into 6-8 balls.

Heat large skillet over medium heat, add 15 mL oil. Place balls in skillet and flatten to 1cm (1/2") thickness.

Cook until golden brown, about 5 minutes per side. Serve warm.

Roasted Acorn Squash

1 acorn squash
30 mL vegetable oil (2 tbsp)
5 mL minced fresh thyme (1 tsp)
2 mL salt (1/2 tsp)

Cut squash in half lengthwise, scoop out seeds. Cut in 2cm (3/4") crosswise strips, place on baking sheet.

Brush with oil, sprinkle with thyme and salt. Bake at 450°F for 20-25 minutes, until tender.

Wild Green Salad

60 mL vegetable oil (4 tbsp)
15 mL lemon juice (1 tbsp)
15 mL sugar (1 tbsp)
45 mL red wine vinegar (3 tbsp)
2 mL dry mustard (1/2 tsp)
2 mL salt (1/2 tsp)
1 clove garlic, minced
pepper to taste
1 L mixed salad greens (4 cups)
60 mL chopped cucumber (1/4 cup)
60 mL shredded red cabbage (1/4 cup)
4 pansy flowers

Shake oil, lemon juice, sugar, vinegar, mustard, salt, garlic and pepper together in glass jar with a tight fitting lid.

Wash and tear greens into bite-sized pieces.

Toss dressing with greens.

Garnish with cabbage, cucumber and pansy flowers.

Apple Crisp

1 L peeled and sliced apples (4 cups)
15 mL lemon juice (1 tbsp)
125 mL rolled oats (1/2 cup)
60 mL all-purpose flour (1/4 cup)
125 mL brown sugar (1/2 cup)
60 mL butter (1/4 cup)

Toss fruit with lemon juice and place in a 2 L (8 cup) baking dish.

In bowl mix together oats, flour, and sugar. Cut in butter until crumbly. Sprinkle over apples.

Bake in 350°F oven for 40 minutes or until topping is golden brown and fruit is tender.

Lesson 3:

Purpose

Explore the advantages of buying local foods and create a top 10 list to include in the cook book.

Objectives

Students will:

- Associate some of their actions, food choices and consumption habits with global issues
- Discuss and evaluate actions we can take to affect change

Materials

- 30 copies of 10 Reasons to Buy Local Food: Appendix A
- North American Consumption Patterns relating to Global Patterns: Appendix B

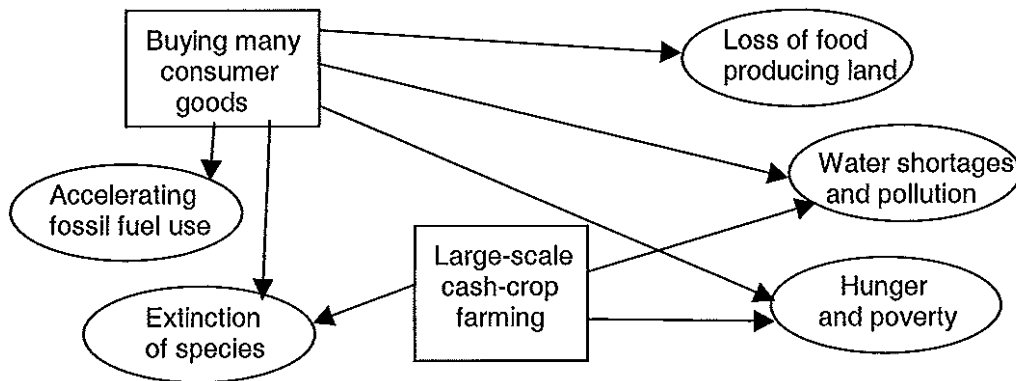
Procedure

Day 1: Reasons to buy local

Day 2 & 3: Preparation and sharing of chosen recipe(s) from menus

Handout 10 Reasons to Buy Local Food. Give students enough time to read the handout. Students will probably find that all of these reasons make sense and seem reasonable, but we need to talk about our current habits and put this all into our context. We're going to create a web using the information in Appendix B. List on a chalk board or overhead projector the Consumption and Global Patterns. Ask students to take a single sheet of paper and write the titles spread out over the page. Use some type of square or circle around the titles to differentiate between the North American and Global Patterns. Use lines and arrows to connect patterns and show direction of effect. Use Appendix B to help guide discussion and raise topics. You may want to start with individual North American Patterns and see how many Global Patterns each effects.

Every students will have a slightly different web and may emphasize different issues. To get you started:



Now hopefully making new connections and understanding a bit more about the effects of our actions we can create our own list of 10 Reasons to Buy Local Food. We want our list to include topics that students know will concern and interest the rest of our particular student population and community.

Sharing and Recipe analysis: We get a chance to taste a variety of recipes and foods prepared by the class. Using the now published cookbooks, how well do our recipes highlight local foods? Students now have a chance to view and critique their cook book: Local Flavours (or whatever you have decided to title yours).

Evaluation

Collect and check student "webs" for completeness and inclusion of topics covered.
Lab observations as per your normal routine.

Reflection

Students learn in a variety of ways and at different rates. Were all students needs met?

Lesson 4:

Purpose

Encourage distribution and sharing of our Local Flavours Cook Book and raise awareness of food issues throughout the school.

Objectives

Students will:

Value sharing what they have learned and getting other students interested in local food products.

Materials

Poster board and paper, photocopy paper, felt pens
The "Prize Basket"

Procedure

Your class will create a game of Jeopardy to play with another class or classes in your school. You may want to choose a science class and social studies class, or find out if the topics of agriculture or local economy has been a recent discussion for anyone. You could even play the game at lunch time with a larger group if you think it would work at your school. You will need to buy a few extra items at the Farmer's Market to create a "Prize Basket" for the winners. The Poster Board is quite quick to create ahead of time – leave the category spaces blank if you are going to have students select them.

Making the game: Divide the class into 5 groups and give each group a category – or ask them to create a category if you don't want to use the same as I have on the following page. Each group needs to create seven to eight answers and questions. As a class we will choose the best five in each category. The more information you can gather from the Farmer's Market or other sources about local agriculture and food products the better prepared you will be for helping the class create the game. Hopefully your discussion in the first lesson will have them thinking on the right track – but actually – the less resources they have to use other than each other the better so that other students in the school are more likely to be familiar with the information. The more students from your class involved and required for the playing of the game the better it will work. Rather than one person playing the role of "Game Show Host" just reading all of the answers to the contestants, each student will be responsible for at least one question (depending on the number of students in your class). Once you have compiled a list of all the best answers and questions in each category, each student will clearly write their clue on a single sheet of photocopy paper.

To play the game: Divide your contestants any way you choose – groups of 5-6 students seems to work well. I have experienced an easier way to play jeopardy than requiring "Buzzers": Each team of contestants gets to select a question in order around the room. Team members are allowed to discuss their answer for up to 30 seconds – this works well because every group thinks they might have a chance to answer the question.

If the team choosing the question cannot answer it correctly then the first person from any of the other teams to **stand** and correctly answer the question is awarded the points (they are not allowed to communicate with their group at this point – this keeps the game moving and interesting and doesn't detract as much from the original team choosing the question). It doesn't matter which group answered the question correctly, the next group in order gets to choose the next question – everyone participates this way. The individual student from your class responsible for the selected question will hold up and read their answer and be in charge of managing responses. You will need to cross off the dollar amounts on the poster board grid as students select questions. You will also need a sheet of poster paper to record contestant winnings. Have Fun!!

Evaluation

Do students participate in the game and display enthusiasm distributing the cook book?

Reflection

Were we able to capture the interest of a broader group of students?

Were the cookbooks taken, read and shared, or just tossed aside?

Jeopardy

To get you started - this is just a sample that is similar to the poster we would create. The sample questions are specific to the Comox Valley on Vancouver Island. Create your own version with your students.

| The Land | The People | The Livestock | The Crops | What's For Dinner? |
|----------|------------|---------------|-----------|--------------------|
| \$100 | \$100 | \$100 | \$100 | \$100 |
| \$200 | \$200 | \$200 | \$200 | \$200 |
| \$300 | \$300 | \$300 | \$300 | \$300 |
| \$400 | \$400 | \$400 | \$400 | \$400 |
| \$500 | \$500 | \$500 | \$500 | \$500 |

Make sure students know which category and dollar amount their individual clue is for. You will probably want a list something like this prepared ahead of time to keep track of all the answers and questions:

The Land

| | | |
|-----|---|----------------------------------|
| 100 | The Farmer's Market is located here in the summer | What is C.V. Exhibition Grounds? |
| 200 | A provincial program encouraging you to "buy local" | What is BuyBC? |
| 300 | | |
| 400 | | |
| 500 | | |

The People

| | | |
|--------|---|------------------------|
| 100 | You will find them at the Farmer's Market | Who are Local Farmers? |
| 200 | A farm that employs many of our students | Who is Seiferts? |
| etc... | | |

The Livestock

| | | |
|--------|--|-------------------|
| 100 | These are the most common "backyard" livestock | What are Chicken? |
| etc... | | |

The Crops

| | | |
|--------|--|--------------------|
| 100 | One of the major crops produced in Comox | What are Potatoes? |
| 200 | You will want to "Eatmore" | What are Sprouts? |
| etc... | | |

What's For Dinner?

| | | |
|--------|--|-------------------------|
| 100 | This restaurant uses many local products in its menu | What is Tita's Mexican? |
| etc... | | |

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www.bcfarmersmarket.org

Community Food Security Coalition
www.foodsecurity.org

International Society for Ecology and Culture
www.isec.org.uk

Organic and Beyond Campaign
www.fatalharvest.org

Union of Concerned Scientists – Greentips Environmental Ideas in Action
www.ucsusa.org

Appendix A: 10 Reasons to Buy Local Food

1. Locally grown food tastes better - Food grown in your own community was probably picked within the past day or two. It's crisp, sweet and loaded with flavor. Several studies have shown that the average distance food travels from farm to plate is 1,500 miles. In a week-long (or more) delay from harvest to dinner table, sugars turn to starches, plant cells shrink, and produce loses its vitality.

2. Local produce is better for you - Fresh produce often loses nutrients quickly. Food that is frozen or canned soon after harvest is actually more nutritious than some "fresh" produce that has been on the truck or supermarket shelf for a week.

3. Local food preserves genetic diversity - In the modern industrial agricultural system, varieties are chosen for their ability to ripen simultaneously and withstand harvesting equipment; for a tough skin that can survive packing and shipping; and for an ability to have a long shelf life in the store. Only a handful of hybrid varieties of each fruit and vegetable meet those rigorous demands, so there is little genetic diversity in the plants grown. Local farms, in contrast, grow a huge number of varieties to provide a long season of harvest, an array of eye-catching colors, and the best flavors. Many varieties are heirlooms, passed down for generations. These old varieties contain genetic material from hundreds of years of human selection; they may someday provide the genes needed to create varieties that will thrive in a changing climate.

4. Local food is GMO-free - Although biotechnology companies have been trying to commercialize genetically modified fruits and vegetables, they are currently licensing them only to large factory-style farms. Local farmers don't have access to genetically modified seed, and most of them wouldn't use it even if they could.

5. Local food supports local farm families - Farmers are a vanishing breed. And no wonder - commodity prices are at historic lows, often below the cost of production. The farmer now gets less than 10 cents of the retail food dollar. Local farmers who sell direct to consumers cut out the middleman and get full retail price for their food - which means farm families can afford to stay on the farm, doing the work they love.

6. Local food builds community - When you buy direct from the farmer, you are re-establishing a time-honored connection. Knowing the farmers gives you insight into the seasons, the weather, and the miracle of raising food. In many cases, it gives you access to a farm where your children and grandchildren can go to learn about nature and agriculture. Relationships built on understanding and trust can thrive.

7. Local food preserves open space - As the value of direct-marketed fruits and vegetables increases, selling farmland for development becomes less likely. You have probably enjoyed driving out into the country and appreciated the lush fields of crops, the meadows full of wildflowers, the picturesque red barns. That landscape will survive only as long as farms are financially viable. When you buy locally grown food, you are doing something proactive about preserving the agricultural landscape.

8. Local food keeps your taxes in check - Farms contribute more in taxes than they require in services, whereas suburban development costs more than it generates in taxes.

9. Local food supports a clean environment and benefits wildlife - A well-managed family farm is a place where the resources of fertile soil and clean water are valued. Good stewards of the land grow cover crops to prevent erosion and replace nutrients used by their crops. Cover crops also capture carbon emissions and help combat global warming. According to some estimates, farmers who practice conservation tillage could sequester 12-14% of the carbon emitted by vehicles and industry. In addition, the patchwork of fields, meadows, woods, ponds and buildings - is the perfect environment for many beloved species of wildlife.

10. Local food is about the future - By supporting local farmers today, you can help ensure that there will be farms in your community tomorrow, and that future generations will have access to nourishing, flavorful, and abundant food.

Adapted from

©2001 Growing for Market

Appendix B: North American Consumption Patterns Contributing to Global Patterns

North American Consumption Patterns

Buying many consumer goods

- goods transport
- goods production requires land
- goods production depletes and pollutes water
- resources depletion
- fuel use
- pollution and climate change

Excessive home energy use

- fossil fuel use
- gas releases from fuels
- pollution and climate change

Suburban sprawl

- extensive use of cars = fuel use
- release of greenhouse and other gases
- highway sprawl, paving, runoff
- shrinking forests and farmlands

Transporting goods long distances

- fuel use
- runoff and oil spills
- increasing roadways

Large-scale cash-crop farming

- job losses, displacement of food crops
- monocultures displace other species
- fertilizers, pesticides, irrigation

Global Patterns

Accelerating fossil fuel use

Increasing air pollution

Loss of food producing land

Ocean pollution

Water shortages and pollution

Extinction of species

Deforestation and desertification

Global warming

Hunger and poverty

Adapted fromSizer & Whitney's Nutrition Concepts and Controversies

Appendix C: Bringing the Food Economy Home

Today's mounting social and ecological crises demand responses that are broad, deep, and strategic. Given the widespread destruction wrought by globalisation, it seems clear that the most powerful solutions will involve a fundamental change in direction - towards *localizing* rather than globalising economic activity. In fact, 'going local' may be the single most effective thing we can do.

Many people will find this claim exaggerated and unrealistic. But we have to ask ourselves whether it is realistic to continue pulling the entire global population into a single economy - one in which a small fraction of the population already uses the bulk of the world's resources. Today, roughly half the world's people, mostly in the South, still derive a large proportion of their needs from local economies. Do we really believe that those people's lives will be improved if we destroy these economies? What can globalisation offer the majority, other than unrealistic promises? Localisation would not only entail far less social and environmental upheaval, it would actually be far less costly to implement. In fact, every step towards the local, whether at the policy level or in our communities, would bring with it a whole cascade of benefits.

Localisation is essentially a process of de-centralisation - shifting economic activity into the hands of millions of small- and medium-sized businesses instead of concentrating it in fewer and fewer mega-corporations. Localisation doesn't mean that every community would be entirely self-reliant; it simply means striking a balance between trade and local production by diversifying economic activity and shortening the distance between producers and consumers wherever possible.

Where should the first steps towards localisation take place? Since food is something everyone, everywhere, needs every day, a shift from global food to local food would have the greatest impact of all.

What is 'global food'?

Global food is based on an economic theory: instead of producing a diverse range of food crops, every nation and region should specialise in one or two globally-traded commodities - those they can produce cheaply enough to compete with every other producer. The proceeds from exporting those commodities are then used to buy food for local consumption. According to the theory, everyone will benefit.

The theory, as it turns out, is wrong. Rather than providing universal benefits, the global food system has been a major cause of hunger and environmental destruction around the world.

The environment has been hit particularly hard. The global system demands centralised collection of tremendous quantities of single crops, leading to the creation of huge monocultures. Monocultures, in turn, require massive inputs of pesticides, herbicides and chemical fertilisers. These practices systematically eliminate biodiversity from farmland, and lead to soil erosion, eutrophication of waterways, and the poisoning of surrounding ecosystems.

Since global food is destined for distant markets, food miles have gone up astronomically, making food transport a major contributor to fossil fuel use, pollution, and greenhouse gas emissions. In the US, for example, transporting food within the nation's borders accounts for over 20 percent of all commodity transport, and results in at least 120 million tonnes of CO₂ emissions every year. In the UK, imports of food and animal feed require over 83 billion tonne-kms of transport, use 1.6 billion litres of fuel, and emit more than 4 million tonnes of CO₂. Much of this transport is utterly needless, since the 'logic' of global trade leads countries to simultaneously import and export the same commodity.

Social and economic costs

As farms have become larger and more mechanised, the number of farmers has steadily declined. The six founding countries of Europe's Common Agricultural Policy (CAP) had 22 million farmers in 1957;

today that number has fallen to about seven million. In the US, 6.8 million farms were in operation in 1935; today there are only one-fourth as many.

The global food system saps rural economies in other ways. People are generally unaware that most of what they spend on food goes to corporate middlemen, not farmers. In the US, for example, distributors, marketers, and input suppliers take 91 cents out of every food dollar, while farmers keep only 9 cents. As global corporations take over food marketing, small shopkeepers are also being squeezed out: in the 1990s alone, some 1,000 independent food shops - grocers, bakers, butchers and fishmongers - closed in the UK each year.

In the South, the globalisation of food is driving literally millions of farming families from the land. Dolma Tsering, a farmer in Northern India, described what has happened in her village: "Whole families used to work on the land. We grew almost everything we needed. Now imported wheat is destroying our market. It's just not worth going to the trouble of producing food anymore, and the village is being emptied of people." Throughout the South, most of those displaced people will end up in urban slums - without community, without connection to the land, without a secure and healthy food supply.

The declining quality of food

Because of the global food system, people around the world are induced to eat largely the same foods. In this way, farm monocultures go hand in hand with a spreading *human* monoculture, in which people's tastes and habits are homogenised - in part through advertising, which promotes foods suited to monocultural production, mechanised harvesting, long-distance transport and long-term storage.

New additives and processes - like UHT milk - are continually developed to extend storage time. For harried consumers, food corporations also provide 'convenience' foods that can be re-heated quickly in a microwave, and even items like 'macaroni and cheese on a stick' which can be eaten with one hand. Nutritional content? We're told not to worry, since some of the nutrients destroyed in processing can supposedly be reinserted. Flavour? Hundreds of additives are on hand to mimic the taste and texture of real food. Food quality? With producers in a competitive race to the bottom, it's not surprising that food poisoning cases are steadily increasing, and new diseases like BSE have appeared.

Decades of government support for global trade have concentrated wealth and power in ever larger corporations, which increasingly dominate every aspect of the global food supply - from seed and feed to everything on supermarket shelves. Today just two companies, Cargill and Archer Daniels Midland, control 70 to 80 percent of the world's grain trade. One agribusiness, Philip Morris, gets ten cents out of every American food dollar - more than earned by all US farmers combined.

Benefits of the local

Awareness is steadily growing that global food is altogether too costly - socially, environmentally, even economically. People are beginning to seek out local food, and a whole movement is gaining ground.

But what, exactly, are 'local food systems'? If the highest expression of the global food system is a plastic-wrapped, highly processed slab of junk food that has been transported thousands of miles, the archetype product of a local food system is fresh food raised on nearby farms and sold at farmers' markets and in independent local shops.

Local food is, simply, food produced for local and regional consumption. For that reason, 'food miles' are relatively small, which greatly reduces fossil fuel use and pollution. There are other environmental benefits as well. While global markets demand monocultural production - which systematically eliminates all but the cash crop from the land - local markets give farmers an incentive to diversify, which creates many niches on the farm for wild plant and animal species to occupy. Moreover, diversified farms cannot accommodate the heavy machinery used in monocultures, thereby eliminating a major cause of soil erosion. Diversification also lends itself to organic methods, since crops are far less susceptible to pest infestations.

Local food systems have economic benefits, too, since most of the money spent on food goes to the farmer, not corporate middlemen. Juan Moreno, a farmer in the Andalusian region of Spain, told us,

"When we used to sell our vegetables to supermarkets we got almost nothing for them. Now, through the local co-op, we're getting much more - three times as much for some vegetables."

Small diversified farms can help reinvigorate entire rural economies, since they employ far more people per acre than large monocultures. In the UK, farms under 100 acres provide five times more jobs per acre than those over 500 acres. Moreover, wages paid to farm workers benefit local economies and communities far more than money paid for heavy equipment and the fuel to run it: the latter is almost immediately siphoned off to equipment manufacturers and oil companies, while wages paid to workers are spent locally.

Food quality

Local food is usually far fresher - and therefore more nutritious - than global food. It also needs fewer preservatives or other additives, and organic methods can eliminate pesticide residues. Farmers can grow varieties that are best suited to local climate and soils, allowing flavour and nutrition to take precedence over transportability, shelf life and the whims of global markets. Animal husbandry can be integrated with crop production, providing healthier, more humane conditions for animals and a non-chemical source of fertility.

Even food security would increase if people depended more on local foods. Instead of being concentrated in a handful of corporations, control over food would be dispersed and decentralised. And if countries in the South were encouraged to use their labour and their best agricultural land for local needs rather than growing luxury crops for Northern markets, the rate of endemic hunger would diminish as well.

Nonetheless, even many of those who acknowledge its negative effects have been led to believe that the global food system is necessary because it produces more food and delivers it at a lower price. In reality, however, the global food system is neither more productive than local systems nor is it really cheaper. Studies carried out all over the world show that small-scale, diversified farms have a higher total output per unit of land than large-scale monocultures. In fact, if providing food for the world's hungry is the priority, then the shift towards local food systems should begin immediately, since they do a far better job of feeding people.

Global food is also very costly, though most of those costs do not show up in its supermarket price. Instead, a large portion of what we pay for global food comes out of our taxes - to fund research into pesticides and biotech, to subsidise the transport, communications and energy infrastructures the system requires, and to pay for the foreign aid that pulls Third World economies into the destructive global system. We pay in other ways for the environmental costs of global food, which are degrading the planet our children will inherit.

When we buy local food, we can actually pay less because we are not paying for excessive transport, wasteful packaging, advertising, and chemical additives - only for fresh, healthy and nutritious food. Most of our food dollar isn't going to bloated corporate agribusinesses, but to nearby farmers and small shopkeepers, enabling them to charge less while still earning more than if they were tied to the global system.

How do we go local?

Local food systems have immense advantages, but most policymakers - in the belief that more trade is always better - systematically support the further globalisation of food. As a result, identical products are criss-crossing the globe, with no other purpose than enriching the corporate middlemen that control the global food supply.

An immediate first step would be to press for policy changes to insure that identical products are not being both imported and exported. If we eliminate needless trade in everything from wheat, milk and potatoes to apple juice and live animals, the reduction in transport alone would bring immediate benefits. What's more, if people around the world were allowed to eat their own bread and drink their own milk, giant corporations wouldn't profit every time we sit down to eat.

Such a step would require a rethinking of 'free trade' dogma. Trade treaties need to be rewritten, reestablishing the rights of citizens to protect their economies and resources from corporate predators.

At the same time, subsidies that now support the global food system need to be shifted towards more localised systems. Governments have spent tremendous sums of taxpayers' money to prop up a costly food system which pretends to provide 'cheap' food. If even a fraction of that sum were devoted to supporting local food systems instead, the cost of local food would decrease substantially, and its availability rapidly grow.

Shifts in energy policy - which now heavily subsidise the large-scale centralised energy systems needed for global trade and industrial 'development' of all kinds - are critically important. In the South, where the energy infrastructure is still being built up, a shift towards a decentralised renewable energy path could be easily implemented, at a fraction of the cost in dollars and human upheaval that huge dams, nuclear power and fossil fuels entail.

We also need to recognise the importance of local knowledge to maintain existing local food systems, and to reclaim those that have been largely lost. Today, a one-size-fits-all educational model is being imposed worldwide, eliminating much of the knowledge and skills people need to live on their own resources, in their own places on the earth.

Changes in tax policy would also help to promote food localisation. Now, tax credits for capital- and energy-intensive technologies favour the largest and most global producers. Meanwhile the more labour-intensive methods of small-scale diversified producers are penalised through income taxes, payroll taxes and other taxes on labour.

Re-regulating Global Trade, Deregulating Local Trade

As we've seen, the steady deregulation of global trade and finance has led to the emergence of giant corporations whose activities are highly polluting and socially exploitative. This in turn has created a need for ever more social and environmental regulations, along with a massive bureaucracy to administer them. That bureaucracy is strangling smaller businesses with paperwork, inspections, fines, and the cost of mandated technologies. The regulatory burden is too great for the small to bear, while the big happily pay up and grow bigger as their smaller competitors die out. How many dairies have gone out of business because they had to have stainless steel sinks, when porcelain had served them well for generations?

Today, there is an urgent need to *re*-regulate global trade, by allowing national and regional governments to control the activities of TNCs. At the same time, there is an equally urgent need to *de*-regulate local trade, which by its nature is far less likely to damage human health and the environment.

Turning the tide

These policy and regulatory shifts would open up space for thousands of community-based initiatives - many of them already underway - to flourish. From CSAs and box schemes to farmers' markets, food co-ops, and buy-local campaigns, people have already begun the hands-on work needed to rebuild their local food systems. But these efforts will fall short if government policies continue to tilt the playing field towards the large and global.

When government ministers blindly promote trade for the sake of trade while at the same time discussing reductions in CO2 emissions, the possibility of sensible policy shifts can seem remote. And so it is, unless activists and other citizens unite behind the anti-global and pro-local banners, and exert powerful pressure from below. Already, unprecedented alliances have been created. Environmentalists and labour unionists, farmers and deep ecologists, people from North and South - are all linking hands to say 'no' to an economic steamroller that destroys jobs as quickly as it destroys species, that threatens the livelihood of farmers while driving up the price of healthy food in the marketplace.

Still more work is needed, however, including education campaigns to reveal the connections between our many crises, to spell out the truth about trade and the way we measure progress, and to graphically describe the ecological, social, psychological and economic benefits of localising and decentralising our economies.

Shortening the links between farmers and consumers may be one of the most strategic and enjoyable ways to bring about fundamental change for the better. How satisfying it is to know that by taking a step which is so good for us and our families, we are also making a very real contribution to preserving diversity, protecting jobs and rural livelihoods and the environment, all over the world.

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