



From Field to Table

Grade Level: Grades 4 - 6

Objectives: to investigate the steps from farmer to supermarket to our home

Materials: large sheets of newsprint cut into pieces manageable for groups of three - five; markers; enough carrot samples so that each group is researching something different: fresh carrots (locally grown and from the supermarket, packaged and unpackaged, regular and mini-carrots); for more groups, bring in simple processed food such as frozen carrots or frozen mixed vegetables, carrot baby food, package of pre-cleaned vegetables and dip from the cooler in the produce department; map of North America (optional)

Time Allotment: 30 minutes

Advance Preparation: collect materials

Laying the Groundwork: Around the time of settlement in the early 1900's there were approximately 40,468 hectares (100,000 acres) of vegetables grown in Saskatchewan, almost all in home gardens. Most homeowners had a garden and relied on that garden for fresh produce during the growing season, and stored vegetables in root cellars for winter months. As people moved into towns they began to rely on those still on the farms to provide them with their food. A farmer *was* the agricultural or food system – or at least the largest part of it – doing nearly everything on the farm. From saving seeds from one year to plant crops the next, raising animals, and growing the food needed to sustain their families, animals and communities, the family farm was the centre. Food was stored at the farm and the farmer sold (or traded) their vegetables, produce and even hay, at the farm gate. Now, the farmer makes up the smallest portion of the agricultural food system. Our modern food system has three components: the people and businesses which manufacture and sell goods and services to the farmers (farming machinery, animals, pesticides, fertilizers, seeds, bank loans, etc); the farmers who grow the food; and the marketing people and businesses which process, transport, store, advertise and deliver food from the farm to the consumer. Now about 90% of the vegetables consumed by Saskatchewan residents are from commercial operations; more than 80% of which are imported from other provinces and approximately 60% of these come from outside Canada. Local production accounts for only a small proportion of the value of vegetables consumed here. ¹

¹ Agriculture in the Classroom *Healthy Food, Healthy Body Study Series 2002 Horticulture Vegetables* www.aitc.sk.ca

This activity has been prepared for The Big Crunch, October 2010.

For more information visit our website www.chep.org.



According to Statistics Canada for the 2007 crop year, there were 329 hectares of vegetables in commercial production in Saskatchewan producing 700,000 metric tons from vegetables grown in the ground. Greenhouse production of tomatoes and cucumbers produced an additional 500,500 metric tons! Eighteen hectares of carrots were in commercial production, producing 138 metric tons with a market value of \$240,000.² Virtually all the carrots grown in Saskatchewan were sold locally at the farm gate, farmers' markets, and to local retailers and restaurants.

Explorations: Begin by asking your students how food gets to their dinner table. Hold up a carrot, and ask the class to brainstorm all the steps it took to grow the carrot – planting, tending, and harvesting. Record their answers and make some connections with arrows. Solicit details not mentioned such as the natural resources used (sun, soil, and water), labour, animals, machines, gasoline.

Divide the class into small working groups. Give each group a fresh carrot from different sources or the processed food that has carrot as its' main ingredient. The carrot at the farm will be their starting point as you will have started the earlier discussion with them from seed to the grown vegetable. Ask each group to trace the steps from the farm to their kitchen for their specific food sample. Once they have initially listed the steps, (processing, transporting, packaging, wholesaling, advertising) ask them to make a drawing of each step. Include factories, paper, packaging, and for older students, such things as the pollution and waste produced. Give students a reasonable time to work on this. Walk around the classroom helping groups make decisions, draw connecting arrows and identifying additional steps in their food system that they may have missed. Each group will be asked to present its collage to their classmates, explaining the steps that it takes to get their food product from field to table.



Making Connections: Ask the students for their reactions to the activity? Did they realize so much went into food's production? How many people handle the fresh carrots between the farmer and the store? Do they know anyone who does any of these jobs? Were any of the collages very simple or very complicated? Why? Bring up the concept of interdependence and what might happen to their system when one or more of its parts are changed or removed. (For example, the price of gas went up; the farmer sold on the outskirts of the city sold his land to a housing developer, or the local grocery store closed.) Does one person decide on what happens along the food system? (No, everyone has a say, and as consumers we can demonstrate our 'say' by what we purchase). Chances are that the food that had the simplest collage was the locally grown carrot – it had travelled the least and was probably the freshest (and perhaps healthiest) of all the choices!

² Connie Achtymichuk, Provincial Specialist Vegetable Crops, Saskatchewan Agriculture and Food www.agriculture.gov.sk.ca using Statistics Canada www.statcan.ca; Statistics Canada Learning Resources site: www.statcan.ca/english/edu/index/htm

This activity has been prepared for The Big Crunch, October 2010.

For more information visit our website www.chep.org.



The carrots supplied by CHEP are from a local farmer within a 2 hour drive from Saskatoon. The activity *Getting to Know a Farmer* gives students an opportunity to appreciate the life and work of a Saskatchewan farm family.

Branching Out: For younger students: see Pre Kindergarten - Grade 3 version
Conduct a sensory and taste test. Generate a list of adjectives that might describe the carrot flavours, tastes and sensations. Which carrots were the most appealing? Smelled the freshest? Had the best flavour?

For Grades 4 +: interview the produce manager of the local grocery store to find out how stores purchase produce; where the carrots (or other vegetables) are coming from, whether or not he can buy from a local farm year round.

For older students: locate the geographic origins of the carrots (and carrot-based food) on a map of North America (or the world); make an assumption of the route that they may have travelled to get to your local market and use a string to demonstrate the distance. Estimate the mileage using the map's scale. Much of our fresh produce comes by truck unless of course it comes from overseas via ship, as in exotic fruits. The real cost of processed food is more difficult to calculate, as it is transported from points across the province or country to the plant, processed (such as the jar of baby food) and then transported out to the retailers. Sometimes, in this global economy that means it is coming and going from around the world! If you were to calculate the cost of transporting that food from just the processing factory (a loaded transport truck gets 2.9 km/L and the current cost – Sept 2010 - of diesel fuel is \$.94/L) you would also need to know how much of that product a transport truck holds. "**Food miles**" (or "**food kilometres**"!) are the distance food travels from the farm to your plate. The concept is used to underline how far many foods are transported through global trade and the costs of this transport, in economic, social, and environmental terms. Here is a Canadian source for an on-line calculator: www.lifecyclesproject.ca/initiatives/food_miles/.

Some more discussion points:

- What are the barriers to their family buying locally? (finances, lack of transportation) Would they have access to a nearby community garden? Farmers' Market? Do they know about the Good Food Box?
- Is shipping food long distances an absolute necessity of life today? Are there benefits to eating food from far away? (diversity of diet supports growers in other communities – do the farmers in distant countries benefit from the food we buy here?)
- What can consumers do to ensure more of our food dollars goes to farmers?
- Given the costs of transporting food such long distances, do you think we are paying too little for our food?

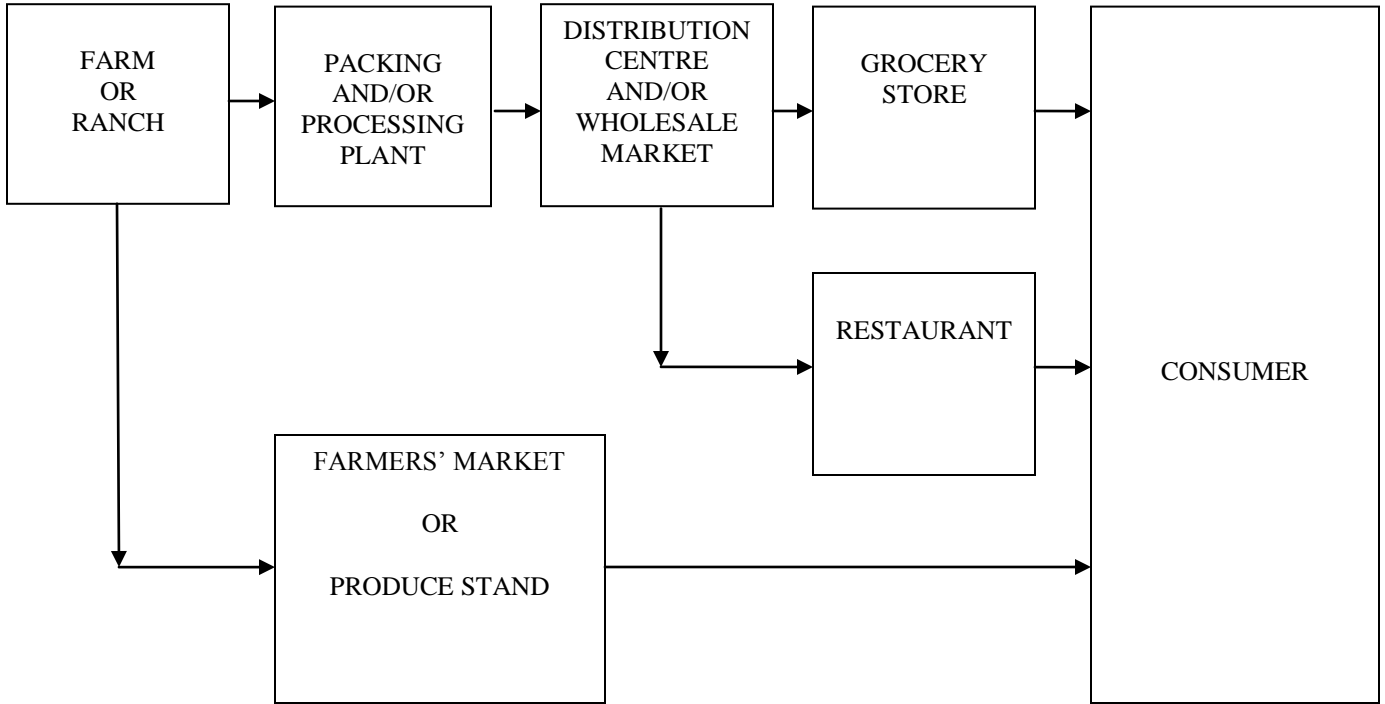
This activity has been prepared for The Big Crunch, October 2010.

For more information visit our website www.chep.org.



Agricultural Distribution Process

Source: California Foundation for Agriculture in the Classroom www.cfaitc.org



For pictures of the system, download the clipart for *Field to Table*.

This activity has been prepared for The Big Crunch, October 2010.

For more information visit our website www.chep.org.

