

# Organic vs. Local Foods

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Which is best for a St. Joseph/Collegeville  
community member?

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This is a question that I have pondered quite frequently in the past year especially since going on a 100 mile diet, where I eat primarily foods from within a 100 mile radius of where I live. It is important that citizens in our community get the best food possible while having the smallest amount impact on the earth. This paper compares local and organic foods in several different categories that are important to community members: availability, affordability, and environmental and community impact. I believe that in the best of worlds it would be possible to have both organically grown and local food, but when that is not available we must make a decision.

## **Introduction**

Recently, people in the United States and around the world have begun to pay attention to how their actions affect the world that they live in. Because of this, people have been changing their behavior and demanding different, more environmentally friendly goods. One of the biggest changes that is being made is in the food industry. This could be because the food market is so large and that there are so many different options available to consumers. Two of the biggest aspects of the food market that consumers have been buying into increasingly are organically grown foods and locally grown foods. Often though, the consumer cannot find foods that are both organic and local and must make a decision between the two options. Several of the criteria that are evaluated in this decision are the price, availability, environmental impacts and community impacts of the growing of these foods. Once these criteria are examined by the consumer, even if it is just a brief decision at a Co-op, he or she will decide which type of food is the best choice for themselves and their families. Although organics are an improvement over most conventional agriculture, careful examination of these criteria and some other externalities, will reveal the benefits of choosing local foods over organics.

Organically grown foods are foods that are grown according to the USDA's certified organic regulations. For this paper the foods that I will refer to as organic are foods that were grown according to these regulations and on farms that are operated by large corporations. Because these foods are grown on a large scale and around the world, the organic foods should be able to be purchased at regular grocery stores any

time of year. I have chosen to define organic foods in this way because these are the types of organics that are typically found in grocery stores.

Locally grown foods will be defined as foods that were grown within 150 miles of St. Joseph, Minnesota and can be found easily at the local farmers' markets or food co-ops. It should be easy for the consumer to be in direct contact with the farmer. Local foods will also include locally grown organic foods.

For this project five different types of food were chosen; one from each food group. These foods are: ground beef (protein), tomatoes (vegetable), flour (grain), milk (dairy) and apples (fruit) (mypyramid.gov). These foods were chosen because they are very basic ingredients that most people will use in their cooking fairly often. In order to determine the prices of each type of food, I visited three local grocery stores in St. Cloud that were large enough to sell organic foods as well as a few other smaller grocery stores in the area. These stores included Byerly's, Cashwise and the Good Earth Co-op in St. Cloud. I also visited with farmers who sell their foods at the St. Joseph Farmers' Market. Not all of the foods considered were sold in the same measurements so they will be given with their prices and available sizes and then compared afterward by calculating the costs so that they are comparable. The farmers and companies that I spoke with were Schroeder Milk, Jim and Mary Dijiovani, Merle and Roxy Roberts and several other farmers that sell their products at the St. Joseph Farmers' Market.

## **Livestock and Livestock Products**

The first two foods that I will be evaluating come from livestock. Organically grown livestock products are foods that have been certified organic by the USDA's organic regulations. According to these regulations, meat that is sold as organic must be from animals that have been "maintained under continuous organic management from the last third of gestation" (Production and Handling Preamble). The animals must spend a major portion of their lives eating only organic foods. This includes feeding animals food that has is "composed of agricultural products, including pasture and forage that are organically produced" (Production and Handling Preamble). This makes sense because what we put into our animals is what is going to end up being in their meat. Non-organic residue contained in feed could show up in the meat. In addition to this:

The producer must not use animal drugs, including hormones to promote growth in an animal or provide feed supplements or additives in amounts above those needed for adequate growth and health maintenance for the species at its specific state of life. The producer must not feed animals under organic management plastic pellets for roughage or formulas containing urea or manure. The feeding of mammalian and poultry slaughter by-products to mammals or poultry is prohibited (Production and Handling Preamble).

Basically, anything that is not included in a healthy natural diet of that particular type of livestock is not allowed. In order to keep the animals healthy, preventative measures should be taken including "a feed ration [of] vitamins, minerals, protein and or amino acids, fatty acids, energy sources, and, for ruminants, fiber" (Production and Handling Preamble). Unfortunately, this can sometimes lead to animals being given supplements that they would not otherwise need if they were given a healthy diet to

begin with. Also, there are no regulations regarding where these supplements come from. A healthy lifestyle for livestock also includes good living conditions defined as “conditions that provide for exercise, freedom of movement, and reduction of stress appropriate to the species” (Production and Handling Preamble). These conditions are a very good start for a well defined source of food, however, organic regulations can have some drawbacks such as cost and the unlimited size of farms.

### *Prices and Availability of Organic and Local Ground Beef*

In the St. Joseph area, organic ground beef is available at Byerly’s and the Good Earth Co-op, but is not available at Cashwise. At Byerly’s the ground beef was sold under the name Dakota Beef and processed in Howard, South Dakota and cost \$6.99 per pound (Byerly’s February 2008). At the Good Earth Food Co-op, the ground beef was sold under the name Murphy’s in Byron, Minnesota and was sold for \$5.59 per pound (Good Earth Food Co-op February 2008). At each of these stores there was only one option for organic beef. For the most part ground beef is available year-round because beef is easily frozen and stored for several months.

Locally grown ground beef is the other option for ground beef for people living in the St. Joseph area. Locally grown ground beef is ground beef from cattle that were raised and processed within a 150 mile radius of St. Joseph, MN. While there are several options for purchasing ground beef from local farmers near St. Joseph, some of them require the purchase of a whole or half of a beef steer or heifer which would include the ground beef. This can be done at the St. Joseph Meat Market. Although it is necessary to have quite a bit of freezer space, purchasing beef in this way is much

less expensive than purchasing beef in parts. In addition to this, all of the cuts of beef cost the same low price per pound. So you can get your steak and ground beef for \$2.19 per pound at the St. Joseph meat market (May 2008).

The closest location that I could find to purchase single packages of ground beef was at the farmers' market in St. Cloud. This beef is grown and sold by Merle's Farm Fresh Meats in Crosby, Minnesota which is about 80 miles from both St. Joseph and St. Cloud. These farmers raise the cattle and then sell it themselves under their own name. Merle's Farm Fresh Meats are sold at the St. Cloud's weekly farmer's market the whole duration of the market which is from late-April to mid-October. During the winter months the meat is sold once a month at a designated spot in St. Cloud. The price of one pound of ground beef is \$3.49 per pound (Merle's Farm Fresh Meats pamphlet).

#### *Environmental Concerns about Raising Ground Beef*

The organic certification of the beef helps to assure at least some concern for the environment is taken into consideration when producing the meat. One of the major problems with conventional beef is that the manure is potentially a major pollutant, but organic certification requires that the manure be used in an environmentally friendly way so that it does not pollute water sources (Production and Handling Preamble). By doing this the farmers can reduce a lot of the pollution that comes from producing beef.

However, one problem that the organic regulations do not address is that cattle are not required to be grass-fed; they are only required to eat certified organic food. This is where some of the organic livestock producers can be very similar to factory farms. Cattle are not meant to eat mostly grains and if they are the majority of their

diets, the cattle can live very unhealthy lives. In addition to this, corn is a very energy and water intensive crop to grow. Even if it is grown organically it still allows for much erosion because of the tillage that corn requires and because its root system does not hold onto the soil very well. Feeding cattle grain also comes along with ethical considerations for human beings. When corn is being raised for and fed to cattle, it is not being fed to humans nor is the land available to grow food for human consumption. When cattle are grass-fed, they most likely are being raised in pastures that are unsuitable for growing other foods. Currently this is a major issue being shown by the food riots in many developing countries. Rather than the grains going to these, it is given to cattle to be eaten by more affluent people. With the affluent populations rising in China and India this problem is very likely to persist and grow.

#### *Other Things to Consider when Comparing Organic and Local Ground Beef*

There are both benefits and drawbacks of purchasing each type of beef. Merle's Farm Fresh Meat costs significantly less than the organic ground beef that was found at the grocery stores. Merle's cattle are primarily grass-fed. Since they are grass-fed, the cattle do not have to be fed many of the supplements that would be required by cattle that are primarily fed grains. The local grass-fed beef could have cost less to produce because he did not have to purchase expensive organic feed. It is also possible that the shipping costs are significantly less because the beef is raised much closer to the consumer. Both types of ground beef are available throughout the year, but Merle's Farm Fresh Meat is only available on Saturdays during the summer and once a month in the winter, while the organic ground beef is available whenever the grocery store is

open. This means that if consumers want to purchase the local ground beef, they have to plan ahead a bit and decide what they will be eating either for the week or the month.

Unfortunately, purchasing both types of ground beef requires a trip into St. Cloud which usually means a trip by car. This can be both a hassle for the consumer and have negative effects on the environment from the pollution, including greenhouse gasses like carbon dioxide and other harmful particulates, put out by the vehicle. But the locally grown ground beef does not have to travel nearly as far to get to the consumers in St. Cloud which is less harmful to the environment.

### *Importance of Researching Products*

It is worthy to note that organic goods are often processed and packed in locations that are not far away from central Minnesota as in the case with the beef (Byron, Minnesota and Howard, South Dakota). However, this does not necessarily mean that it was grown right there. The food could have been grown elsewhere and shipped to the production plant from practically anywhere. This is because the USDA Organic rules do not require food to be local, unless the producer claims that they only use locally produced food. For instance, Dakota Beef is located in South Dakota, but the producer they highlight on their website is from Illinois ([dakotabeefcompany.com](http://dakotabeefcompany.com)). In many cases processors do attempt to use locally produced foods, but since this is not always the case, it is important to find out where the producers got their inputs.

### *Making the Decision between Organic and Local Ground Beef*

In order to have even less of an impact of the environment, the best choice for beef and other livestock products are products that are grass-fed rather than corn- or



grain-fed. Even conventional pastures use little or no chemicals. This is because the pastures are filled with grass that will grow very easily on its own, involving very little input by the farmer. This could also reduce the cost of the final product because depending on the area where the farm is located the inputs that go into producing corn for corn-fed beef can be much costlier than producing grass for a grass-fed cow. Because of all of these factors, the best option for people living in the St. Joseph and Collegetown area is to find locally raised, grass-fed beef. Another option that many people choose is to become vegetarian and not eat meat at all. While it is not necessary to completely cut meat out of one's diet, it would be a good idea to consider eating meat only a few times a week, rather than several times per day.

### **Skim Milk**

Skim milk is an important part of many people's diets. Skim milk was evaluated because it is the most popular type of milk among consumers (Kappers' Big Red Barn). Organically grown skim milk is milk that was produced according to the USDA's organic regulations. The farmers are not allowed to treat their cows with Bovine Growth Hormones (rBST and rBGH) or any other antibiotics or drugs. The rest of the regulations are very similar to the regulations that organically raised beef have to meet except that the cows do not have to have been born or raised organically. However, they must go through a 1 year transition period of being fed organically (Production and Handling Preamble). To reduce the cost of this transition period the cows only have to be fed 80% organically for the first 9 months and then 100% organically for the last 3 months. This loophole however also provides an opportunity for farmers to cut costs by

not feeding their younger non-producing cows organic diets. The extra expenses though, were definitely reflected in the prices that were found at the grocery store.

### *Prices and Availability of Organic and Local Skim Milk*

There was a very good selection of organic milk at all of the grocery stores that I looked at in St. Cloud. Gallons of organic skim milk were not available so notice that the organic skim milk is sold in half gallons and not the full gallons like most of the local milk. Byerly's had milk from Horizon Organic at \$3.89 per ½ gallon and Organic Valley at \$4.09 per ½ gallon (Byerly's February 2008). The Good Earth Co-op had Organic Valley milk for \$4.39 per ½ gallon (Good Earth Food Co-op February 2008). Cashwise had Organic Valley milk for \$3.89 for ½ gallon and Full Circle for \$3.99 per ½ gallon (Cashwise February 2008). The Horizon Organic Milk could have been produced at any of their farms across the United States (Horizon Organic). The Organic Valley milk was produced in Wisconsin or Minnesota and packaged in St. Paul (Smith-Vuich). Availability of milk is generally not a problem because it can easily be shipped and cows produce milk throughout the year.

There are similar options available for purchasing locally produced skim milk around St. Joseph as there are for organic milk. Locally produced milk is defined as milk that is available in the St. Joseph area that has been produced within a 150 mile radius. I found options for milk at the Good Earth Food Co-op in St. Cloud, Minnesota and Dahlin's Super Market in Avon, Minnesota. Pride of Main Street dairy is a creamery that uses local milk from the Sauk Centre, Minnesota area and Cedar Summit which is an organic creamery in New Prague, Minnesota. The Pride of Main Street skim milk cost

\$4.59 per gallon and the Cedar Summit skim milk cost \$3.69 per ½ gallon plus a bottle deposit (Good Earth Food Co-op February 2008). Another type of milk that is available in the St. Joseph area is Schroeder milk processed in Maplewood Minnesota which is 82 miles from St. Joseph and most of the farms that they purchase their milk from are within a 100 mile radius of that facility (Schroeder, April 2008). However, Schroeder milk was not found in St. Cloud, but in Avon, a small town west of St. Joseph. This milk cost \$3.69 at Dahlin's Super Market in Avon, Minnesota (April 2008). This could be a better option for people who live west of St. Cloud, but probably would not be the best option for people who already live near or within St. Cloud. One possible reason that it was not found in St. Cloud is because the Schroeder milk company likes to work mostly with small family operations because they are also family owned and operated (Schroeder, April 2008).

#### *Environmental Concerns about Producing Skim Milk*

The environmental impact of purchasing organic or local milk is very similar to the impact of choosing organic or local beef. There are large differences in the distance that the milk had to travel from farm to glass. Again this causes pollution to be released into the atmosphere by cars, but there are fewer pollutants released by vehicles that don't drive as far so the milk that is produced locally allows for less pollution to be from vehicles. Other environmental factors are similar to beef including whether the animals are corn- or grass-fed and how their waste is taken care of.

### *Other Things to Consider when Comparing Organic and Local Skim Milk*

There are both positive and negative aspects to purchasing organic and locally produced milk. The cost of the locally produced milk is well below that of the organic milk. The price for organic milk averaged to be about \$4.00 per half gallon. The price for the locally produced milk was closer to \$4.50 per gallon, except for the Cedar Summit milk which was probably more expensive because it is also organically produced. So the local milk was about half of the cost of the organically produced milk. Again this could be because the cost of producing organic foods is usually higher and the fact that it has to be shipped farther. The cost of shipping factor may affect the cost of the Cedar Summit milk compared to the other organic milks because even though they are all organic, the Cedar Summit has the lowest cost per half gallon by at least 20 cents. All of this milk is available whenever the grocery stores are open, but like the ground beef, they all require a trip into St. Cloud in order to purchase the milk.

There has also been some concern recently about Bovine Growth Hormones in milk. Many people are concerned that there could be adverse health effects for humans that consume this milk. Organic regulations do not allow these hormones to be used on organic dairy herds. The Pride of Main Street providers also do not use Bovine Growth Hormones. In addition to concerns about human health, concerns about the ethical treatment of cows that produce the milk has also come the attention of many people. The Bovine Growth Hormone treatment requires animals to receive shots of the hormone on a daily basis and studies have shown that the cows are much more likely to suffer from disease and lameness (Doohoo). This practice could easily be viewed as unethical because of the pain and suffering the cows experience.

### *An Example of Potential Problems with Organic Regulations*

The requirements for organics are much better for the animals and the environment than conventional practices, but still there are loopholes. A couple problems with organics are that organic requirements do not limit the size of the farms (Production and Handling Preamble). This means that there can still be factory farms producing organic goods while most people are under the perception that organic means family farm produced. Horizon Organic milk is one company that has undergone some criticism for trying to sneak through some of the loopholes in the USDA's Organic regulations, especially those stating how much access cows are allowed to have to pastures and how large the pastures must be per cow (Chediak). These things are not specified by the regulations. Horizon Organic has also been accused of overusing the conversion time allowed for new cattle. Rather than raising the organic calves that were born from their milk producers, they purchase animals that were raised non-organically, and then convert them (Allison). This reduction in the organic requirements is supposed to be a one time, economical way for farmers who want to start producing organically to transition to organics, but it is being abused by Horizon dairies that are as big as 4000 head (Allison). Because the cows are not raised organically for their entire lifetimes, the cows are more likely to have antibiotics and other residue in their systems.

### *Making the Decision between Organic and Local Skim Milk*

Local skim milk is the best option for consumers in Central Minnesota. It is substantially less expensive and always available for people to buy. Unfortunately, both options require a trip into St. Cloud or Avon. The environmental impacts of each kind of

milk depend a lot upon what the cow ate. It is hard to know without contacting the farmer or milk processing company, but local packing companies and farmers are usually very willing to speak with customers and tell them what the cows were fed. Local milk may require a bit of research, but the research can be done easily unlike trying to contact industrial organic sellers, like Horizon Organic, who probably do not know exactly how the milk that they are selling was produced.

## **Produce**

Fresh produce is another common part of a person's diet in St. Joseph. Organic tomatoes and apples are options that can be purchased by consumers in the area. These regulations require that the produce is grown on soil that has not be treated with any prohibited chemicals for at least three years prior to harvest (Production and Handling Preamble). This is an attempt at getting all of the chemicals that were in the soil previously removed so that the plants are unaffected and can pick up no trace of prohibited additives. The producer must also "manage soil fertility, including tillage and cultivation practices, in a manner that maintains or improves the physical, chemical, and biological condition of the soil and minimizes soil erosion" (Production and Handling Preamble). This means that the soil that organic farmers use should not be degraded and most likely will be improved. The regulations also require that the "producer...use organically grown seeds, annual seedlings, and planting stock" (Production and Handling Preamble). This is so that there is no chance of contamination from GMO's or chemical residue. Another requirement is that

the producer must use practices to manage crop pests, weeds, and diseases, including but not limited to crop rotation, soil and crop nutrient

management, sanitation measures, and cultural practices that enhance crop health. Such cultural practices include the selection of plant species and varieties with regard to suitability to site-specific conditions and resistance to prevalent pests, weeds, and diseases. Mechanical and biological methods that do not entail application of synthetic substances may be used as needed to control pest, weed, and disease problems that may occur (Production and Handling Preamble).

This means that not only must the producer refrain from using chemicals to grow his or her crops, they must also take preventative measures so that their crops remain healthy. Cultural ways of reducing weeds, pests, and diseases are encouraged unless they require the use of chemicals. The regulations that are required by the USDA for a crop to be labeled as organic are positive steps towards becoming better stewards to the land, but there are some problems with them, including costs and some health concerns.

#### *Prices and Availability of Organic and Local Tomatoes*

Organically grown fresh tomatoes are tomatoes that have not been processed and are grown by corporations outside a 150 mile radius of St. Joseph that abide by the USDA's organic regulations. The Co-op had Roma tomatoes for \$1.69 per pound and regular tomatoes for \$2.99 per pound (February 2008). Both of these kinds of tomatoes came from Mexico. Cashwise had regular tomatoes for \$3.69 per pound that were from the producer Earthbound (February 2008). Byerly's did not have any organically grown tomatoes (February 2008). Organically grown tomatoes are available year-round because they can be shipped in from places that can grow tomatoes at different times of year than we can locally.

Locally grown fresh tomatoes are another option for people living in the area.

Locally grown fresh tomatoes are tomatoes that have been grown within 150 miles of

St. Joseph that have not been processed. These tomatoes can be found at area farmers' markets and the Good Earth Food Co-op starting in the early summer to sometime in October. There are many different growers at the farmers' markets that provide tomatoes for customers. A couple of the producers are Jim and Mary Dijavani and Bernie-the tomato King. Their prices for tomatoes from Bernie are \$20 for 25 lbs. of tomatoes (St. Joseph Farmer's Market September 2007). However, after purchasing several boxes of tomatoes from this vender, the price of the tomatoes went down to \$15 and would sometimes include a selection of peppers and salsa depending on what he was not able to sell that day. This is one benefit of maintaining a relationship with the same farmers throughout the season. Dijavani's grow organic tomatoes. When asking Jim what he usually charges for his organic tomatoes, he said that he usually does not charge any more than other tomatoes at the farmers' market that are not organic. He hopes that having the organic certification will instead draw consumers to purchase his tomatoes rather than the competitions'. He also said that the price also really depends on how the tomatoes are selling that particular day. If they are not selling well, he will lower the price (Dijavani, May 2008).

### *Environmental Concerns about Producing Tomatoes*

The environment is one thing that consumers will want to consider when choosing between organic and locally produced tomatoes. One of the major things that was mentioned before is the amount of traveling that organic tomatoes do during the off-season. This excessive amount of travel leads to more pollution entering the atmosphere from trucks hauling the produce. Although some of the local producers did not follow all organic regulations and therefore were not organically certified, they



followed many of the rules as guidelines and were attempting to become more like organic growers and were willing to attempt to transition to organic production in the future. Blights are one of the major problems plaguing tomato farmers and until they find varieties that work well without any chemicals, they may need to use some defense against these blights that may involve chemicals. Again this is where it is important to be in contact with your local farmers to see how your foods are grown and what chemicals, if any, are being used.

### *Other Things to Consider When Comparing Organic or Local Tomatoes*

There are many important things for the consumer to not when deciding between organically and locally grown tomatoes. The availability of organic tomatoes is much better than for the locally grown tomatoes, at least during the winter. However, this availability comes at a price, literally. The organically grown tomatoes are much more expensive than the locally grown tomatoes. One reason because of this is that the shipping of tomatoes is difficult because they are so easily damaged. This also can compromise the taste of the tomatoes, especially when thick protective skins are required for the tomatoes to travel over one thousand miles from Mexico. It can also increase the cost of the tomatoes because they have to be shipped so far. So purchasing fresh tomatoes when they are in season is a very cost effective idea.

In addition to the local tomatoes costing less because they are plentiful when they are in season, as with many goods that are sold at a farmers' market, sometimes the price can even go down further if a good relationship is made with the farmer selling the goods. And because fresh tomatoes are so inexpensive during the right time of

year, it makes economic sense to purchase them in bulk and freeze or can them for the rest of the year so that the consumer does not have to pay extra for tomatoes that are not in season. Also, for the local tomatoes, St. Joseph residents do not need to travel far for their tomatoes. They are available at the St. Joseph's Farmers' Market starting in the summer. This location is easily accessible by biking or walking, neither of which emit pollutants. To purchase corporate organic tomatoes in or out of season consumers have to travel into St. Cloud.

### *Making the Decision between Organic and Local Tomatoes*

Locally produced tomatoes are the best option for consumers if they can accept not having fresh tomatoes throughout the entire year. Not only will this benefit the environment by emitting less toxins into the atmosphere, but the consumer's pocketbook and taste buds will also appreciate the local tomatoes.

### **Apples**

Apples are a very common food that are included in many of the diets of people living in Central Minnesota. Organic apples are apples that are grown by corporations according to the USDA's organic regulations and are available in grocery store in the area. Apples are different from the many other crops because they are perennials, meaning that they live for several years. Under USDA organic regulations the producing plants are perennials they must be grown as organic for a year before the producing stock may be sold as organic and therefore produce organic food (Production and Handling Preamble). This rule would be used for things such as apples and other fruit bearing trees. This rule could be abused because for the first several years of the

trees' lives because the trees do not bear any fruit and often are kept in nurseries for this time period before being sold to producers. So under this regulation, the trees could be grown conventionally until a year before they would be sold. Organic methods also encourage farmers to provide areas for pests to live other than the apple trees, so that the pests are averted from the apple trees to another habitat.

### *Prices and Availability of Organic and Local Apples*

The selection of apples at the grocery stores was the best out of any of the items that was looked at. At Byerly's there were four types of organic apples available for \$2.49 per pound, but the Pink Lady Apples cost \$2.99 per pound (February 2008). All of these apples but the Fiji's (which were from New Zealand) were from within the United States. At the Good Earth Co-op there were two varieties of apples, Spartan and Braeburn each available for \$1.79 per pound (February 2008). These were originated from British Columbia. Cashwise had four varieties of apples; each available for \$1.89 per pound from an undisclosed location (February 2008). Organic apples are available year-round because they can be shipped in from around the world and most apples will keep for at least a month or so.

Locally grown apples are another option that consumers in central Minnesota have. Locally grown apples are apples that are grown within a 150 mile radius of St. Joseph and are easily available to St. Joseph community member. There are a number of orchards that fit these criteria. One of these is Collegeville Orchards which is open from late summer to fall and sells apples that are raised six miles away from St. Joseph in Collegeville, MN. The cost of these apples are from \$6-10 per peck or \$0.57-\$1.00

per pound (St. Joseph Farmers Market and Collegeville Orchards October 2007).

However, since it is possible to negotiate prices with the farmer, it was possible to purchase seconds of his apples (for making applesauce and baking) that were \$15 per bushel. This comes to about \$0.36 per pound.

### *Environmental Impacts of Organic and Local Apples*

The environmental impacts of choosing either organic or local apples are somewhat significant. There are a lot of pests and diseases that can affect apple trees and sometimes growing apples organically can be very challenging. It is not yet economically feasible for local orchards near St. Joseph to become certified organic because of the pests and diseases that are present in the area. However, it is not difficult to find out what the apple farmer has put on his orchard either by visiting him or her at the orchard or having a discussion with the farmer where the apples are sold. Also because the organic apples must be grown without the use of pesticides, they may not look as nice as conventionally grown apples. Because people are used to very shiny, blemish free apples, this means that people are less willing to purchase these often less than perfect apples especially since organic usually means more expensive. Because of this many apples are wasted because they do not meet the high consumer expectations.

The impact of pollution on the environment from organically grown apples during the winter can be great. One variety of organic apples that was available in St. Cloud was grown in New Zealand. This is more than 8,000 miles away from St. Joseph! Many of the other varieties of organic apples were also from outside the United States.

It is important to realize that this was during the winter season, so in the fall there would most likely be apples that were grown closer to St. Joseph. However, during that time of year it would also be possible to purchase local apples that were grown within the community which would reduce the distance that the apples would have to travel significantly, even if they were grown within the United States.

#### *Other Things to Consider when Comparing Organic and Local Apples*

Again one of the biggest factors that is playing against the organic apples is the high price. All of the organic apples that were found in St. Cloud were from outside of the United States. Rising fuel costs could be having a major effect on the prices of these apples in addition to the fact that like all organic foods, organic apples are often considered to be a specialty item which increases their price. However, since local apples are very plentiful when they are in season during the fall, producers have a difficult time selling all of their apples at a high premium. Because of the large amount of apples produced by competing orchards, the farmers must sell the apples at a lower cost so that people are willing to purchase their apples. Because of this, it is very easy for consumers to stock up on apples while they are inexpensive and keep them through part of the winter or process them into things like applesauce, pie-filling and apple cider. Although the consumer will not be able to purchase more apples during the off-season, if they store and process the apples properly, it is possible that they could eat them throughout the whole year.

#### *Making the Decision between Organic and Local Apples*

Like the other local products, apples that are local are the much less expensive option. This is most likely because they did not have to travel as far to the consumer and that they are plentiful when they are in season. Although there is the possibility of the use of chemicals and they are not available year-round, the impact of the local apples on people's pocket books, carbon emissions and other pollutants from vehicle emissions are great. This coupled along with the positive impact of supporting local farmers makes local apples the better choice for consumers living in St. Joseph.

## **Flour**

Flour is another very common part of the diets of people who live in central Minnesota. Organic flour is flour that has been produced according to USDA Organic Regulations. The wheat is grown without chemical pesticides or fertilizers in a very similar fashion to the regulations that have already been described about organic produce.

### *Prices and Availability of Organic and Local Flour*

Organic flour can be found easily in St. Cloud. There were several varieties of flour that were available, but this paper will be focusing on whole wheat flour. At Byerly's, Bob's Red Mill whole wheat flour was \$4.39 for three pounds (February 2008). At the Good Earth Co-op it was \$4.49 for three pounds (February 2008). At Cashwise it cost \$4.39 for five pounds (February 2008). Although the organic flour was only available from one producer, it was available at each of the stores. The flour is also available year-round because it does not spoil quickly.

Purchasing locally produced flour is another option for people living in the area. Local whole wheat flour is flour that is from wheat that was grown and processed within 150 mile radius of St. Joseph, Minnesota. There is a mill in Freeport, Minnesota called Swanny Mills that purchases most of the flour that they mill from North Dakota and Minnesota (Bowen 14). Although North Dakota does not quite fall into the 150 mile radius, a portion of the wheat is from Minnesota and North Dakota is still very close. The cost of the whole wheat flour from Swanny Mills was \$0.69 per pound from the Good Earth Co-op in St. Cloud (February 2008). Other types of Swanny Mills flour were offered at Cashwise as well for \$9.98-\$11.14 for 25 pounds (February 2008). Swanny Mills flour is also available in many other varieties, including organic, right at the Mill in Freeport, Minnesota. This of course also includes the whole wheat flour for \$0.70 per pound.

### *Environmental Concerns about Producing Flour*

The environmental impacts of choosing organic or locally produced flour are fairly significant. Depending on where the wheat is produced, it is possible that the wheat requires much irrigation. Since organic regulations do allow irrigation, and do not limit it, it is possible that organic wheat can be grown in places that do not receive enough rain for growing wheat without irrigation. However, in and around Central Minnesota wheat does not usually need to be irrigated. Wheat also does not usually need many chemical inputs to grow well so the gap between local and organic foods is much smaller compared to chemical intensive crops like corn.

### *Other Things to Consider when Comparing Organic and Local Flour*

There are many factors to consider when deciding between organic and locally produced flour. Price is one of the biggest factors that may concern community members. The cost of locally produced flour is much less especially if it is purchased from the Cashwise. If it is purchased directly from the mill in Freeport it is even less expensive because the flour can be purchased in bulk without having any transportation or seller costs. The availability of the flour is not a problem in either case because it can be stored year-round.

### *Making the Decision between Organic and Local Flour*

Locally grown flour is really the best choice for people living in the St. Joseph area. It is much less expensive, especially if it is possible to travel to Freeport and pick up the flour directly from the mill. By purchasing flour from the mill, there is a good possibility to have contact with the miller who mills all of the flour himself who has an extensive knowledge of his product. In addition to this purchasing locally assures that the wheat did not have to use excess water.



**Table 1: This table shows the average cost and distance traveled for each food and type of food. The local distances were calculated from the farm to St. Joseph and the organic distances were calculated from the distance to the processing plant because it was very difficult to trace where the food came from before it went to the processing plant.**

Average Cost and Distance Traveled		
Food	Average Cost	Average Distance Traveled (in miles)
Organic Ground Beef	\$6.29/lb.	>195
Local Ground Beef	\$3.49/lb.	80
Organic Skim Milk	\$8.00/gal.	~1500
Local Skim Milk	\$5.94/gal.	78
Organic Tomatoes	\$2.70/lb.	2023
Local Tomatoes	\$0.80/lb.	5.6
Organic Apples	\$2.04/lb.	2429
Local Apples	\$0.78/lb.	6.7
Organic Flour	\$1.28/lb.	1663
Local Flour	\$0.70/lb.	20
Average Organic Distance		2562
Average Local Distance		38.06

### *Reducing One's Carbon Footprint*

One of the most important and obvious reasons that many people choose to purchase local foods is the reduced amount of carbon that is used to transport the foods from farm to table. It has been estimated by the Leopold Center for Sustainable Agriculture that average traveling distance for food produced within the United States from farm to point of sale is 1494 miles (Pirog)! This is an incredible distance that has major environmental implications including vehicle emissions and waste from food spoilage during travel time. If other countries were included in their calculation the number would be much higher. This study also stated that “the typical American

prepared meal contains, on average, ingredients from at least five countries outside the United States” (Pirog). There have not yet been any studies done to calculate the average for how far food travels including food from other countries.

Figure 1 – This map shows where all of the foods traveled from in order to get to Central Minnesota for purchase by consumers. Note that many of the organic items came from outside of the United States.



By eating the local food featured this paper the distance that the food travels could be reduced by more than 1500 miles! This means that the amount of fossil fuels used to transport the food is significantly less; which also means that the amount of pollution and carbon dioxide that is spewed into the atmosphere is also significantly reduced.

### *Health Impacts of Choosing Organic or Local Foods*

The difference between organic and locally grown foods is not significant compared to the difference between eating non-processed foods such as fruits and vegetables and processed foods. However, choosing local foods reduces the vehicle emissions which would reduce pollution that causes health problems like asthma (American Academy of Pediatrics).

Another very important reason to choose local foods is that it allows one to know where one's food came from and to process one's own food. When a person knows how her food was produced, she will know exactly what she is putting into her body. Then by processing her own food she will know exactly how the food was processed and what exactly was put into the food. Products that can be easily processed by oneself include things like dehydrated fruits, canned or frozen vegetables and breads. Because the consumer processed the food his- or herself, there are no unknown substances such as preservatives or artificial flavors that are contained in the food. By doing this, consumers have ultimate control of what is contained in their food and what they are putting into their bodies.

### *Impact on Community by Purchasing Organic or Local Foods*

Purchasing food from local farmers is very important in building the local economy and community. Only with demand from the community will farmers be willing and able to continue selling at the farmers market. Every time a product is purchased, it is like voting for a product to continue to be offered. When a consumer chooses corporate organic foods over local foods, the local farmer is not receiving that money,

instead, someone who the customer will never meet will profit from the sale. Local farmers are much more likely to care for their customers than people who will never meet them, because they want and need the same people to come back every week and purchase their food from them.

When local farmers are not selling enough food, they cannot continue selling; but when they can sell and make a good profit, they often expand and try new products. In addition to this, money spent in the community is much more likely to stay within the community and benefit community members. This concept is called the multiplier effect and it means that when money that is spent in the community, the money will circulate in that community's economy. The more money that is spent in the community, the more likely that more opportunities for spending money (like new places to purchase goods) will be created and the amount of money that stays in the community will grow therefore expanding the local economy. A good estimate of how big this effect can be comes from Agricultural Economist Dick Levin of the University of Minnesota: "every additional dollar of income in the hands of independent, family farmers can produce between two and eight times additional income for local businesses through the multiplier effect" (Bedford). This is a great thing for all community members especially those who have local businesses.

Purchasing local foods also allows for the opportunity to build relationships with other community members especially at the farmers' market. The farmers' market is usually a very community oriented event where community members can gather and have an opportunity to meet and build relationships with other people who attend and sell at the farmers' market. Community members can also talk with farmers and learn

anything that they would like to know about how their food was grown and tell the farmers what they would like to see at future farmers' markets.

### *The Importance of Relationships with Local Farmers*

In addition to being able to purchase extremely fresh produce from the farmers' market, this is the best and often the only opportunity that most people will ever have to talk with the people who grow their food. Not only is a great way to find out what is going into one's body, it is a place where one can suggest to farmers what one would like to see. These suggestions can include anything from what is being sold at the farmers' market to how the foods is grown or raised.

### *Dealing with Time and Availability Problems*

Dealing with the availability of local foods can prove to be a challenge, but if one is willing to take on this challenge the benefits during the winter are great. It is important for people who live in the St. Joseph community and would like to eat locally to recognize that during the winter months there will be little to no produce available. Because of this throughout the summer and fall, any produce that a consumer wants in the wintertime must be frozen, dehydrated, canned or otherwise preserved. Although much time must be spent on doing this in the summer and fall, during the winter these produce items can be prepared quickly because they have already had much of their processing done previously. In addition to this, these produce items will taste much better than anything you can find at the grocery store because they will not have had to travel for over a thousand miles to get to your plate.

## **Conclusion**

By purchasing locally grown foods over foods grown by corporate organic farms, people living in St. Joseph and the surrounding communities can reduce their footprint on the environment by reducing the distance that their food traveled and by choosing methods of production that do not harm the environment. Also, by putting their money into the community, they are supporting both their neighbors and positive ways of producing food. With a seasonal diet and a bit of planning, people who choose locally grown foods, can also make their dollar go much further than if they choose corporate organic foods. Finally by choosing locally produced foods, people can create positive relationships with the farmers in the area, enlivening the community.

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