

## **Food, Fuel and Climate Change Solutions: Feeding Your Home with Healthy Fuel**

by Sat Jiwan Khalsa, TPSS Co-op member

Many Co-op shoppers place a high value on buying food that is produced locally and is good for the planet. Use of these purchasing guidelines can make heating your home as healthy as feeding your body.

In the February/March issue of this newsletter, Mike Tidwell explained how the typical American diet contributes almost as much to the problem of global climate change as the emissions that come from a car, and that by eating locally, organically and with a focus on vegetarian foods we can greatly reduce that impact.

For many local households, changing the fuel that they feed to their home heating system provides many of the same benefits as purchasing local, organic foods—and cooperative ideals are leading the way. By shifting their purchases of home heating fuel away from natural gas and oil, and instead burning corn, these families are reducing the money they spend and the climate-changing emissions associated with their houses.

### **Local Purchases—Local Benefits**

When you choose to shop at a co-op and buy food that is produced naturally and locally, you are making an investment for the future. You invest in your own health by selecting foods grown without herbicides and pesticides, foods that are natural and wholesome, and foods that are at peak freshness, full of nutrients and flavor. These investments also pay dividends to the planet. Buying local, organic food helps preserve farmland and open space by keeping local farmers in business and supports organic farming techniques which respect the planet and aim to replenish the soil through natural fertilization, application of compost and manure, crop rotation and good old-fashioned rest.

These same principles that you use to feed your belly, produce dramatically similar results when you apply them to fuel purchases for your home heating system.

### **The Scoop on Corn**

For more and more people in the local area, burning corn to heat their homes has become cheaper and easier, and has been shown to have tremendous environmental benefits. Over the past couple of decades, alternative fuels produced through agricultural means have become more popular and more widely available. For years corn has been used to make ethanol, a gasoline additive. Soybean and used cooking oil can be processed into bio-diesel to power cars, buses, farm equipment, and more recently even for use in home furnaces. For thousands of years, wood has been burned around the world as a primary heating and cooking fuel source. Some of these bio-mass fuels still need improvement and need to be produced and harvested sustainably if they are to be truly renewable sources of energy. If efficiency is your goal, consider that it takes about 1.6 acres of land to grow the grain that is fed to livestock to produce the meat in an average American's diet each year. For the local folks burning corn, it takes about a third of an acre of land to grow enough fuel for a family for one heating season.

Burning corn to heat your home may sound weird, but here's how it works and why it's good for you and the planet. Corn is a renewable resource that can produce a new crop every year. As the corn grows it absorbs carbon dioxide (a major climate-changing gas). As the kernels are burned they release no more CO<sub>2</sub> than they absorbed. In fact, a lot of the CO<sub>2</sub> remains in the corn stalk and roots, which in turn end up stored in the soil. Compare this to fossil fuels such as natural gas and oil, which are essentially a one-way street, releasing all the stored energy and CO<sub>2</sub> as it burns.

Growing, transporting and burning one ton of corn actually has a net carbon dioxide emissions of negative 484 pounds because most of the plant is not burned. To get the same amount of heat from burning natural gas releases 1,980 pounds of CO<sub>2</sub> into the atmosphere (burning oil releases 2,701 pounds).

### **A Question of Production:**

It's as important to buy healthy food as it is to make sure this food is produced in a way that is healthy for the planet. Similarly, you want to make sure that the corn you use to heat your home is produced in a sustainable way. Currently, a lot of large-scale agribusiness isn't much better than the fossil fuel industry. Excessive inputs of petroleum-based fertilizers, factory farms, combined with the thousands of miles much of our food is shipped, all contribute to depletion of resources, concentrated pollution, and general degradation of the environment. Much of the corn grown in the US using conventional methods is very energy, fertilizer, herbicide and pesticide intensive, which contributes to pollutant run-off and soil erosion. And that's why the corn used by the local residents is:

Non-GMO;

Organically fertilized;

And employs a "no-till" agriculture method which minimizes soil erosion and keeps more climate-warming carbon dioxide locked in the soil.

I bet you're asking yourself, "But, is it safe?" Natural gas is extremely flammable, and if not handled properly oil can make a mess of the environment. What if you have a truckload of twenty tons of corn barreling down the road and it gets into an accident. Hey, you've got a "corn spill!". You can pick it up with your hands or a shovel and maybe leave a few kernels for the squirrels and birds to have a field day.

### **A Distribution Problem. A Cooperative Solution:**

A couple years back when there was only a handful of local residents burning corn to heat their homes, they had to travel up to Mt Airy, MD every few weeks to pick up their corn. The first couple trips to the farm were fun, but it gets old quickly. How could the corn burners improve access to the product they wanted?

It seemed the best way to overcome this distribution problem was to follow the model of many purchasing cooperatives (such as natural food grocery stores). By aggregating their purchases, members were able to get cheaper prices and a more convenient delivery system. With help from the City of Takoma Park and a cash grant from the corn stove manufacturer who realized he could sell more stoves if there was a more convenient way to get corn, the first urban grain silo was erected on the Public Works property.

The Save Our Sky Home-Heating Cooperative was born. Through the hard work of its founding members, the Cooperative now has over 30 families picking up corn from the local silo, instead of an hour's drive away. The results are that the farmer is selling more corn, and at a better price than if he sold it on the wholesale market; the corn manufacturer is selling more stoves; and it's easier than ever to consider using this alternative fuel source.

Switching to corn as your home heating fuel source is not for everyone. Many of today's problems actually stem from too many people doing the same thing. And in fact, sustainable solutions to climate change (or any other problem) won't come from everyone adopting the same strategies, but rather from a creative mix of people working together, forging the way with a diversity of solutions, and willing to take pioneering steps that create a brighter, more hopeful future.

### **Getting Started**

The home heating season is ending, but the planting season has just begun. Imagine that a farmer in Mt Airy, MD may be planting the seeds for corn you could be using to heat your home next winter. Just a few months from now, you could be saving money on your heating bill, helping to preserve local farm land, and contributing to the fight against global climate change and its all too real impacts on the Chesapeake region. Here's how to get started:

Consult with a local corn stove dealer on where a corn stove would work best in your home. Order your stove early. Depending on demand and current availability, delivery could take over a month. Get in touch with the local corn buying cooperative. Their membership numbers are growing quickly, but they've thoughtfully planned space for a second silo to be placed right next to the first one. Install your stove. It takes about 2 hours and can be vented directly through an exterior wall. Receive your corn silo orientation, and pick up your first load of climate-friendly fuel to heat your home. Sit back and enjoy a hot cup of (fair-trade, organic) tea and a good book in front of your new stove.

### **Resources**

For more information on Clean Energy Corn, and other ways to help solve global climate change by acting locally:

"What You Eat Affects the Sky," Mike Tidwell, Co-operative Effort News, Feb-March 2005.

Chesapeake Climate Action Network: CCAN

Save Our Sky Home-Heating Cooperative.

Sat Jiwan Khalsa has been a member and volunteer at TPSS Co-op since 2001 and is a board member of the Chesapeake Climate Action Network. Chat with him while he's bagging your groceries. He enjoys puns, but will spare you the corny jokes.