

Living Energy Farm

July-August 2013 Newsletter



Kitchen skeleton: the entire south-facing roof will be a solar collector

Framing Begins!

Framing has begun (and is almost finished) on our fossil-fuel free kitchen. The structure for our kitchen is traditional stick frame. We chose this method over timber frame because timber frame requires large, old hardwood trees, and is more expensive and difficult. Stick frame uses pine and other softwoods that are harvested from plantations. It is not the most sustainable building method, but code requires some sort of wooden structure, and it is the lesser of two evils.

Our kitchen employs passive solar design- many windows on the south wall, not so many on the other walls- and will be super-insulated using strawbales stacked around the studs. These two simple and easy building techniques will result in a space that is comfortable in most conditions without any active heating or cooling, other than residents opening and closing windows. For very cold and hot times of the year, we are also building an active solar heating system (with wood back-up) and a cooling system that uses flow through of well water. Stay tuned to hear more about these green building techniques as our construction continues.

Upcoming Workshops

As our harvest season heads into full swing, we're offering two workshops on seed saving, August 24th and September 21st. These workshops will cover seed saving from tomatoes, melons, peppers, squash, cucumbers, corn, and okra. We'll show you the processing techniques we use on our farm, and share tips on how to save seed on a home scale as well. Both workshops will be held 1-5pm at Living Energy Farm in Louisa.

On July 5th we held our Introduction to Construction workshop for women. It was a big success, the only complaint was that the workshop was too short! So we've decided to host an all-day workshop on October 5th. The workshop will start at 9am and run till 5pm, with a break for lunch. Lunch will be potluck style, please bring some food to share.

Advance registration is not necessary, but if you plan to attend one of our workshops please RSVP livingenergyfarm@gmail.com. We ask \$25 for our workshops, or an in-kind donation of tools, materials, or labor. No one will be turned away for lack of funds.

Food Preservation without Fossil Fuel

August is the season when our kitchens overflow with buckets of tomatoes, giant zucchinis, and piles of okra. The rush to get everything planted and weeded becomes the rush to get everything “put up” (preserved) before it spoils. For most folks, modern food preservation means canning, freezing, and maybe drying with an electric dehydrator. At our fossil-fuel-free farm, our options are a bit different. This year we've had success with fermenting and canning, and mixed results with solar drying. Methods we'd like to experiment with in the future include cold storage (root cellaring), and preserving in oil, salt and vinegar.



Canned tomatoes. In the background is the fire pit where they were processed.

Fermentation is becoming more popular as part of the local food movement, as folks rediscover the superior flavor and nutrition of raw fermented foods. It is very easy to do. Simply cut up veggies, add spices (we usually use garlic and dill), pour over a brine and keep the veggies below the level of the brine with a plate or a sealed plastic bag full of water. In the summer, the pickles are ready in less than a week. They take a few weeks in cooler weather. We've had great results fermenting cabbage, green beans, peppers, okra, and cucumbers. Fermentation does not preserve food for as long as other methods, but it does stretch out the harvest as fermented foods will keep for a few weeks at room temperature (several months in a root cellar or refrigerator). They can also be canned after fermentation, although this affects the flavor and nutrition.

Canning is the method that most people associate with food preservation, but canning is actually a modern technology compared with other preservation methods. It was invented in the early 1800s as a way to supply food to soldiers during the Napoleonic Wars. Canning requires a large amount of energy in a short period of time, but it can be done with low-grade fuel and is much more energy efficient than freezing. Firewood is a renewable energy very well suited to canning food. We have a large wood-fired canner made by an Amish stove maker (D&S Machine in PA, no website) but our canning runs this year have been too small to need it. Our best success for small batches has been canning with a pot suspended over an open fire. The heat transfer is excellent and it uses less firewood than using a vented cook stove. The downsides are that it's a bit smoky and the outside of the pot gets sooty, but we're used to that.

Dehydrating food is probably the oldest preservation technology, but depending on what you are trying to dry, it can be difficult to do successfully. The easiest foods to dry are field corn, beans, and grains. We let these crops dry most of the way in the field, and then put them in our solar-powered blower for a few weeks before storage. More tricky to dry are vegetables like tomatoes. This year we set up screens in our solar oven, cracked the door and dried green onions, summer squash, and tomatoes. It has been a challenging summer for solar drying because of the rainy and cloudy conditions. Tomatoes in particular are prone to mold if they

don't dry fast enough, and can burn if left to dry for too long. We've had some success with sun-dried tomatoes, but they need a lot of attention. If you plan to do a lot of drying, we recommend planting varieties that are well suited for this method. These include low moisture tomatoes like Principe Borghese, and thin walled peppers like Jimmy Nardellos (both are available through Southern Exposure Seed Exchange). In the future we plan to set up a solar dryer with a wood-fired back up, since food doesn't wait for the sun to come out before it spoils.

Cooking with Biogas

On August 3rd it was a rare sunny day. The sun was strong even in early morning so Alexis cooked breakfast with our parabolic solar cooker. Later, by allowing herself plenty of time and using the hay box- an insulated box used for retained heat cooking- Debbie cooked lunch using only the parabolic solar cooker as well. Keith was making dinner, which he started over the solar cooker. But then some clouds came over the horizon and the solar cooker stopped working. We were so close to a firewood-free day! That's when Pedro stepped in. We finished cooking dinner with gas from Pedro, our biogas digester, and thus completed a firewood-free day! (Not just firewood free, but free of corporate supplied fossil fuels as well.)



Our homemade burner built from an aluminum pot and some long bolts.

Our biogas digester has been producing flammable gas for a number of weeks, but we have been having trouble burning the gas with a regular stove burner. Alexis built a burner that works with our homemade gas, and now we are using the biogas to cook intermittent meals. Unfortunately, Pedro is not producing a significant quantity of gas for our level of use. We only have enough gas for about one meal a week. Our next challenge is to vary the types of feeds and frequency of feeding to see what Pedro likes the best.

Living Energy Farm is a project to build a demonstration farm, community, and education center in Louisa county that uses no fossil fuels. For more information see our website www.livingenergyfarm.org, or contact us at livingenergyfarm@gmail.com or 434 409 6006. Donations are tax deductible.