

Living Energy Farm
September - October 2023 Newsletter

Living Energy Farm Celebrates its 13th Anniversary, Come Celebrate With Us!

We're celebrating our 13th Land Day on November 18, 2-9pm. All are welcome! There will be tours of LEF at 2 and 5pm, a slideshow presentation on our projects in the Caribbean at 3pm, and an open mic at 4pm. For those who want to stay after dark, there will be a dinner, bonfire and DC dance party. Beware there is a half mile walk to get to LEF. Come on out and join us!

Simple Harvester

LEF's Simple Harvester was officially made public on October 13, 2023. We sent out a press release. The press didn't respond, but we got lots of responses from farmers and other interested parties.

We are currently working with a couple of entities that will help African farmers produce and use Simple Harvesters. The Soybean Innovation Lab (SIL) is a large organization based in the U.S. They have programs to help support African farmers to grow and harvest soybeans. SIL has a "thresher project" in which they are teaching Africans metal working skills and setting them up with equipment (welders, sheet metal rollers, etc) so they can fabricate threshers in



Simple Harvester, Prototype 2. We are now working on the next model.

various African countries. SIL is supported by a few different universities. Going forward, we are working with the University of Missouri and SIL to complete the next stage prototype of the Simple Harvester. We will provide SIL and the University of Missouri with information so they can set up small shops (the same shops making threshers) in Africa to make Simple Harvesters.

The prototype we have built at LEF of the Simple Harvester has proven the concept, but it is not "field ready" just yet. Our first prototype harvester was built years ago, and was a mechanical disaster. The working prototype we have now is prototype two. It works, but it has been cut apart and stuck back together for years now. It's a bit messy. The third prototype is under construction, and is being built from the ground up based on all we have learned from prototype two. It has a three foot intake width, and has some modest improvements that will help a lot with harvesting efficiency.

After prototype three, we plan to build prototype four that will be ground driven (powered by its own wheels) so it can be pulled by draft animals, a small tractor, or tiller. We have a Chinese manufactured micro combine with a three foot intake. It has a nine horsepower engine that has to work pretty hard to make the machine run. The Simple Harvester (prototype two) has a five horsepower engine that can operate the machine at less than half throttle even though it is the same width as the Chinese made machine. The Simple Harvester needs a lot less energy to function than other harvesters. It's the only combine harvester that we know of that can be ground driven.

Further prototypes could make the Simple Harvester wider (perhaps six feet or so), and self propelled. We have

a friend who has an old, pull type International (that's a brand name, like John Deere) combine with a six foot intake. It's an impressive machine. It has hundreds of bearings, dozens of belts, gear boxes, and drive chains. Prototype three of the Simple Harvester will have one drive belt and a dozen bearings. It's a radically simpler machine that will, for the most part, do the same work. We are excited to be continuing with the project.

DC Microgrids in Puerto Rico and Jamaica

Several exciting projects are coming out of connections we made in last summer's DC solar training/immersion, organized by El Departamento de la Comida (El Depa), and hosted at Living Energy Farm.

The first is a partnership to distribute DC systems in Puerto Rico through EnergizaPR, a solar company owned and operated by Ricardo Martinez, who attended the training. Ricardo started his company because he believes in getting working class people out from under Luma (the corrupt, privately owned Puerto Rican electrical utility), and in control of their energy supply. At the same time, he has seen first hand how the battery/inverter systems recommended by most solar companies are financially disastrous for many Puerto Ricans, who often go into debt for battery systems that don't work well or last very long. Because of this, Ricardo used to discourage his customers from investing in batteries, instead suggesting grid-tie systems. But grid tie systems don't help his customers get through power outages.

After seeing our DC systems at work, Ricardo is convinced that they are a better solution. He says that most people just want the basics: lights, fans, electronic devices and refrigeration. We can supply a kit that can do all that for \$3,000, less than half that of a comparable AC system, and our systems last for decades. Ricardo is excited to offer DC kits through his website, starting soon. Last year we shipped 14 solar direct drive refrigerators to Puerto Rico. We have shipped another 14 recently. We're working on getting 12VDC battery kits to Ricardo as well. He is interested in offering payment plans to his customers, to make the technology more accessible to working class people. We will do that as funding allows.



Afia Walking Tree (second from left) from Jamaica, with John, Debbie, and Alexis.

Another exciting partnership is with Solidarity Yaad Farm in Jamaica. Solidarity Yaad is a climate justice advocacy organization that prioritizes teaching BIPOC gender expansive women, girls and LGBTQI+ folks. The project's founder, Afia Walking Tree, is a permaculture instructor who attended our last training. Afia and

Debbie are working on shipping a pallet of equipment to Jamaica, including solar kits, a Roxy oven, direct drive fridge and water pump. Afia's goal is to have the equipment set up in time for a Permaculture Design Course happening at the farm in January. Tara and Millo from El Depa will be traveling to Jamaica in January to help with the design course, and install the equipment.

Some combination of Debbie, John, and/or Alexis will be returning to Puerto Rico in February and March of 2024 to continue training, and support with more installations. Likely our biggest project will be through Urbe Apie. Urbe Apie is a nonprofit that reclaims and revitalizes abandoned spaces in downtown Caguas. They just received a grant to renovate one of their reclaimed buildings with a DC Microgrid system. Erid Roman Rosario, who attended our training, is coordinating the renovation. This ambitious project will include both private apartments and community spaces in the installation. We're working with El Depa to put together a crew of installers, including several folks who trained with us last summer.



Urbe Apie, urban reclamation project in Caguas Puerto Rico, and a future site for LEF's DC Microgrid technology.

Growing Food on Trees

At LEF, we grow as much food as we can on trees. Our biggest producers are persimmons, with blight resistant pears and jujubes also making a substantial contribution. We continue to learn about how to grow food on trees. Here is some of what we feel like we have learned in the last few years.

A) Persimmons In China, Japan, and Korea, persimmons are very much a part of the culture. The Asian persimmons have been bred into dozens of varieties. They are fantastic, but most are not cold hardy for zones 6 or colder, especially as climate change bites with increased variation of weather. The American-Asian crosses are delightful in that they get more cold hardiness from the American side of the family and have a wonderful sweet flavor and larger size gained from the Asian side of the family. The Rosseyanka was the first Asian/American cross. The Nikita's Gift was the second. They are both amazing fruits, and our most important tree-borne foods. We named our kids Rosa and Nika after the Rosseyanka and Nikita's Gift Persimmons. This year our Nikita's Gift crop is reduced because of the crazy spring weather we had. The Rosseyankas look good. We have a lot of trees, so even a bad year is a good year. We dry lots of Nikita's Gifts and store the Rosseyankas on trays on our porch. They can be eaten through most of the winter with no processing at all. Very nice!

In the past few years, we have acquired several more Asian-American cross persimmons, those being Kassandra, Zima Khurma, and Mikkusu. Now all three of those varieties have fruited, we can comment on their quality. The last several years have seen very cool spring weather, this year being quite severe. That means it's a little hard to say what a "normal" harvest season would be for these fruits. That said, here's what we know. The Kassandra is quite early, late August and September probably in a normal year (October this year). They are modest in size, very sweet, and fairly juicy. A delightful fruit, though probably not a major contributor to our food self sufficiency regimen at LEF. They are too early for us to dry in our dryer. We really scramble to harvest all that we have in late August and early September.

The Mikkussu and Zima Khurma are both very similar to the Nikita's Gift. They both appear to ripen in October (again, hard to guess what "normal" might be). Both are about the size of a medium orange or apple, larger in size than Cassandra or Rosseyanka. The Mikkusu sets very heavily. Branches may need to be propped up. It is best if allowed to get very ripe. The Zhima Khurma is really fantastic. It is more dense, less juicy, and has a very rich, sweet flavor, perhaps being even more dense than the Nikita's Gift. We will likely expand our production of Zhima Khurma. All in all, these three persimmons are excellent additions to our ability to grow fruit on trees.

We grow some American persimmons, Proc being the best. Most of our other American persimmons do not get harvested because they are inferior to the Asian/ American crosses.

B) Jujubes Our relationship with jujubes has been evolving. In China, jujubes are very popular. They are very easy to grow. Jujubes have historically been bred along two different lines. One line of jujubes is sweet and juicy right off the tree, truly delightful to eat fresh. The second line of jujubes are a bit drier, not as good fresh, but they dry quite reliably, and thus can be stored long term. Jujubes are sometimes referred to as "Chinese dates" in their dried form.

Many nurseries sell Li and Lang jujube varieties. Jujubes are naturally a desert plant, though they seem happy enough in the humid southeast, with one caveat. That caveat being that the fruit of the Li will rot on the tree faster than you can pick it if you have persistent rain in the fall. The Li is a prolific producer, but the tendency of the fruit to rot is a problem. Overall, its fine as a drying jujube, but not the best really. The Lang, at least in Virginia, is fairly worthless. It doesn't taste like much you would want to eat fresh off the tree. We do not grow them at all at this point.

For fresh eating jujubes, our favorite is Sugar Cane. It is truly a delightful, sweet, juicy, magnificent little fruit. It's a favorite of many people who eat it, and a very reliable producer. Honey Jar is similar in flavor, but not as reliable production wise. For drying jujubes, Tigertooth (Silverhill) is good. It's quite late, which gives us more time to harvest and process them. It is will not rot with heavy rains. Sherwood is a bit similar to Li, and has a lovely malty flavor. It is also does not rot as easily as Li. There are many other varieties that we have not tried. Those are our favorites. All in all, jujubes are an excellent addition to food self sufficiency. They thrive on neglect, and produce a lot of food for us.

C) Pears Persimmons, jujubes and pears are the "big three" in terms of food we grow on trees. We grow lots of other fruits, and some nuts. The nuts in theory are great, including both filberts (hazelnuts) and pecans. The limitation is you have to be willing to kill dozens of squirrels to harvest nuts. Ethical issues aside, that's time consuming. Pears are easier than nuts that way, if less calorie dense. We eat pears fresh, dry them, and make pear sauce.

Our best summer pears are Ayers and Seckle. They are both small and super sweet. They are both reliably blight resistant. Our best fall pear is one we found. We call it Wintersweet. It's probably a Keifer seedling. We found it growing on the farm of a friend of ours. It's an unusual pear. It's firm, crunchy, a bit tart, and quite sweet. We eat them through October and November. The fruit without insect damage will store quite a while.

We have a variety called Harvest Queen that does well. It gets significant blight damage, but grows well enough to keep producing. It's a Bartlett cross that has that delightful Bartlett flavor. It's later than Seckle or Ayers, coming ripe through August.

We have a lot of other varieties planted. Potomac, Shenandoah, and Harrow Sweet have made good pears, but really get beat up by blight. We have friends who grow Magness, though ours have been unproductive because of blight damage. We do not grow any Asian varieties because if you put them on a table with the Wintersweets, no one will eat the Asian pears. They just don't taste like much compared to the Wintersweets. We have other

varieties planted, but have not had enough experience with them to comment.

Farm and Community at LEF

Between working on supporting the growth of DC Microgrids in Puerto Rico, working on the combine, raising food, earning money, and taking care of adults and children, we have a lot on our plates. We have harvested our seeds crops. Otto has joined us full time. Brenda, Carrie, and Otto are heading up seed processing (shelling dry okra pods, cutting winter squash, shelling sunflower heads). We may cut back further on seed production next year if we can make the finances work. John has been fixing broken things, which never seem to be in short supply on a farm. David has joined us full time, and is quite diligent in his efforts. He is helping with upgrading the insulation the biogas system for winter. Deb is heading up the completion of taking Magnolia (the house in the town of Louisa) off grid. The kids are helping out some with persimmon harvesting, and going to a cooperative home school at Twin Oaks.

We feel like we are doing good work. Support us if you can.

*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 Living Energy Farm, 1022 Bibb Store Rd, Louisa VA, 23093. Donations to the Living Energy Farm Institute are tax deductible. **To make tax deductible donations, do not go to the Virginia Organizing website, go here instead: <https://donatenow.networkforgood.org/1388125>** **Make sure to designate your donation for Living Energy Institute.***

Articles and videos about LEF:

Low-Tech Magazine (based in France) did an lengthy, well-researched article, largely about LEF, entitled ***Direct Solar Power: Off-Grid Without Batteries***. It's at

<https://solar.lowtechmagazine.com/2023/08/direct-solar-power-off-grid-without-batteries/>

That article talks a lot about optimal utilization, translate “community is the magic bullet that makes renewable energy work.”

Matt Dhillon at Cville Weekly did one of the best brief summaries of LEF we have ever seen. The article is entitled ***Power Shift, Award-winning Living Energy Farm Makes Living Off-grid Sustainable***. It is at <https://www.c-ville.com/power-shift>

Truthdig did an article on LEF by Megan McGee, an excellent review of our work in Puerto Rico. It is entitled ***Decolonizing Puerto Rico Through Solar Power***. It's at

<https://www.truthdig.com/articles/decolonizing-puerto-rico-through-solar-power/>

We continue to post new videos on Youtube. The latest is *Solar Power Systems That Last Forever*, focused on our solar powered kitchen. See

<https://youtu.be/6XiHClx8d2Q>

How to Never Pay an Electric Bill

<https://www.youtube.com/watch?v=N5Wk7inoIxI&t=201s>

This video is a walk-through of our energy systems at Living Energy Farm. It is a concise summary of how these systems work, and why they are not in common use already.

Solar Installations In The Navajo (Dine') And Hopi Reservations, March 2020

<http://livingenergyfarm.org/solar-installations-2020/>

This is a photo essay about our project to bring durable solar energy systems to the Dine' and Hopi Reservations, where thousands of people live without grid power involuntarily.

Support Living Energy Farm's Climate Justice Campaign, and Bring DC Microgrids to People Who Need Them

<http://livingenergyfarm.org/support-our-climate-justice-campaign/>

This is an updated web page describing our broader social justice ambitions.

How to Live Without Fossil Fuel (Introductory Video) <https://www.youtube.com/watch?v=Ri2U6u8p65E>
Powering a Community with Solar Electricity (LEF has the only DC powered community that we know of, here's how it works) <https://www.youtube.com/watch?v=FvdExgvHnRI&t=23s>
The Best Way to Store Off-Grid Energy <https://www.youtube.com/watch?v=2wOxQ3sL9zc>
Batteries that Last (almost) Forever <https://www.youtube.com/watch?v=dfrgLsyFs0E>

Virginia Homegrown created a program at LEF (the LEF part starts at the 29 minute mark in the program)
<https://www.youtube.com/watch?v=MDGP0C9MIzU>

International Permaculture has done 2 articles on LEF. One is in issue #93, Autumn 2017, and the second is in issue #94, Winter 2017. See <https://www.permaculture.co.uk/>

Article about LEF at the Atlantic Online Magazine

<https://www.theatlantic.com/politics/archive/2017/01/anarchism-intentional-communities-trump/513086/>

Article about LEF in The Central Virginian

<http://www.livingenergyfarm.org/cvarticle.pdf>

LEF on CNN

<http://www.cnn.com/interactive/2015/09/us/communes-american-story/>

Cville weekly in Charlottesville VA

<http://www.c-ville.com/off-grid-model-environmentalism-made-easy/#.VcHobF054yo>