L.E.T.S. Lebanon

Issue 6, January 2014

L.E.T.S. (LOCAL ENERGY TRADING SYSTEM) - ENVIRONMENTAL AND SUSTAINABLE LIVING NEWSLETTER

IN THIS ISSUE:

Share your news for L.E.T.S. Lebanon, add a friend to the mailing list, or ask a question, email alexis.baghdadi@gmail.com

Dear friends,

It has been a very exciting six months for us, bringing together our developing permaculture community and finishing the year strong.

Now, with recharged energy and motivation, we are taking the adventure to the next step.

This January, we officially registered a new non-government organization titled **SOILS Permaculture Association Lebanon**. From this platform, we aim to improve the teaching of permaculture and encourage better cooperation between different like-minded people.

We will be bringing a number of workshops in the next few months, building up to the Permaculture Design Certificate (PDC) course brought for the first time to Lebanon this spring. To stay updated with these events, follow us on Facebook: https://www.facebook.com/SOILS.PermacultureAssociationLebanon

As we grow and evolve, so does our newsletter. L.E.T.S. Lebanon will soon be getting a makeover inspired by our new SOILS identity and based on different feedback from friends.

So get ready for some changes and, as always, keep sharing your news with us.

To find out more about SOILS and our work email us at: contact.soilslebanon@gmail.com

Sincerely,

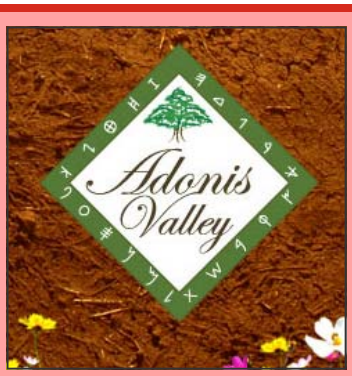
The L.E.T.S. Lebanon Team
SOILS Permaculture Association Lebanon

ترا ب
للتربية البيئية لبنان

SOILS
PERMACULTURE ASSOCIATION LEBANON

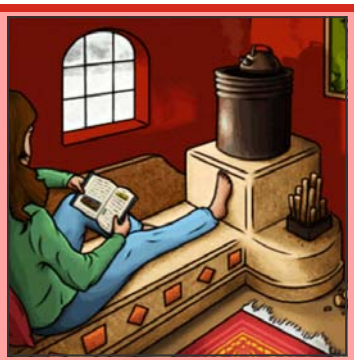
GREEN RESOURCES

ADONIS VALLEY PRODUCTS



Organic traditional food products from locally grown ingredients.
http://adonisvalley.com/Home.html

I F*ING LOVE ROCKET STOVES PAGE**



Resources, tips, models and inspiration for building rocket stoves.
https://www.facebook.com/RocketStoveScience

LET'S FOCUS

EXPERIMENTING WITH OUTDOOR ROCKET STOVES

I recently made my first attempt to build a mini rocket stove from 100% recycled material (tin cans/ boxes). The rocket stove is a practical cooking tool that is easy to build and uses only little quantities of wood (scraps and twigs) and doesn't produce a lot of smoke.

This basic model is easy to build. It took me around 1 hour (including the time to take pictures).

Warning: Since this type of stove involves an open fire without an exhaust system, it should only be used in outdoor, well-ventilated areas.

It might be better to use cans with removable paper labels (as opposed to painted ones) because the paint emits a bad smell and smoke when heated.

I used 3 cans of different sizes. Generally, it's preferable to use cans with no paint on - but for my first time I made do with the ones I had available.

First, I cut off the bottom of the small can and used it to measure a circle on the side of the medium and large cans. I then cut out the circle from the medium can and I fit in the small can after some adjustments.

I then cut out another circle in the large can and I fitted in the small can through both larger ones (see figure 3). The small horizontal can will be the feeder through which wood will be introduced; I added a piece of tin in the feeder to lift the wood off the bottom and allow more air to circulate. The medium can will be the combustion chamber and heat riser. The space between the medium and large cans needs to be filled with an insulating material to retain the heat. In my case I used ash from the wood stove in my house. Finally, I made a hole in the lid of the large can and covered the stove.

I placed a small metal frame (the kind used with small kettles on regular stoves) over the hole of the large can's lid so as not to risk suffocating the fire with a large container (I guess a grill iron would work as well) and I placed the cut-out bottom of the small can over it so the fire wouldn't be in direct contact with the container.

To light the stove, I put some pieces of cardboard topped with a few twigs in the small can, and I used a few drops of machine oil to help start the fire. Quickly the fire became strong and reached the top of the stove. A lot of oxygen enters the combustion chamber, creating a very good burn so that only steam and some CO_2 escape from the top. I brought a kettle filled with around 2-3 cups of water to a boil within a few minutes using 6 twigs only. In the small can I added a horizontal piece of tin to allow air to go in from underneath the twigs.

This was just an experiment to understand how a rocket stove works, if you are interested in helping me build a better rocket stove or mass heater (see Page 3) please get in touch: khoinds@yahoo.com

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Shared by Rita Khawand

UPCOMING EVENTS

TRASH - THEATER PERFORMANCE (CHILDREN 6-12 YEARS OLD)

A dance performance about creativity & recycling

FEBRUARY 8-9, 2014
4:00 p.m. (45 minutes)

Tickets: LBP 15,000 and LBP 20,000

Sunflower Theater, Tayyouneh

Tel: +961.1.321290
https://www.facebook.com/events/226136420906554/?ref=2&ref_dashboard_filter=upcoming

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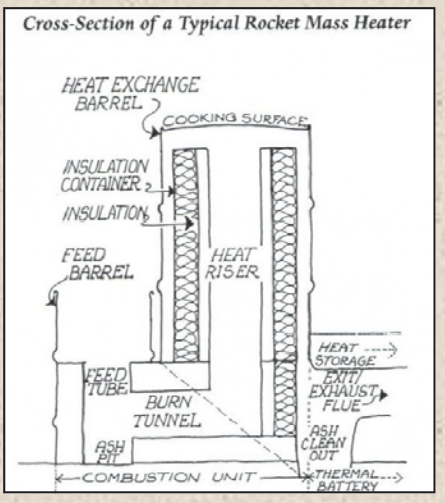
LET'S FOCUS

HEATING YOUR HOME WITH THE ROCKET STOVE



On my return to Australia, we had planned to move into a little "Superadobe" hut on our friends' property in Mollongghip (about 80 km away from Melbourne) which is quite a cold place. My girlfriend told me that we should build a **rocket stove** with a mass heater so, not longer after that, we started doing our research.

We found out that the idea of rocket stoves came from the need to find a better way to burn wood in places where it is not widely available. Nowadays, it has been used and experimented with all over the world. There are systems that consist of a combustion unit only that can be used for cooking, heating a room or heating water (see Outdoor Cooking Stove on Page 2), but you can also add a mass heater to absorb the heat and raise the temperature in a room more effectively than with "open" chimney systems.

It opened a whole new world of wood burning for us. Luckily, we got a hold of a book called: *"Rocket Mass Heaters. Superefficient Woodstoves you can Build (and Snuggle Up To)"* by Ianto Evans and Leslie Jackson, published by Cob Cottage Publications, which allowed us to build our own.

The rocket stove is basically L-shaped and consists of the following main parts: the **feed tube** (where wood is added), the **horizontal burn tunnel**, the **insulated heat riser**, and the **barrel** (on top of which you can cook or heat water). If the stove has a **mass heater**, smoke must be guided outside through the pipe exhaust (**flue**). This is how it works: when the heat burns in the heat riser, it arrives to very high temperatures (up to 1,500ºc) but when it touches the surface, it immediately reduces to around half way (750ºc) the resulting difference of pressures makes the gases drop and creates enough draw to move them horizontally or in any direction.

We started experimenting by piling some bricks in the rocket stove's L-shape and burning wood. The system was amazingly efficient, however, we discovered that proportions were very important to get a more efficient burn. For example the size of the burn tunnel has to be a third the size of the heat riser. Another thing is that the size and length of the exhaust will determine the size of the mass storage unit. It became one of those things that you research partially, build and then try it, fix it and build some more.

First, we built the burning chamber with recycled materials such as bricks, a steel 6 inch pipe for the heat riser, and we used scoria (volcanic rock) held together by chicken mesh for insulation. Then we used more bricks to build a base and more of the 6 inch pipe for the base of the mass storage unit, which we led up through the roof. Once the pipe structure was in place, we covered it with a "bench" form made of big rocks and clay mixed together to allow the heat to circulate through them and be stored within.

Afterwards, we covered the bench with a 1 inch (2.5 cm) layer of cob (mix of sand, clay and straw), to give a smooth finish to the mass heater - also, the final cover (render) will stick to it with ease. It is important not to exceed the 1 inch thickness since cob is very insulating, so it could trap the heat inside the heater too well and not allow it to warm the room. Finally, we mixed our render using sand, lime and a reddish oxide. We covered the bench with a 2 mm layer which we allowed to dry for over a month to prevent cracking.

Rocket stoves are still in their experimental stage, which makes it difficult to find information - the best thing you can do is keep on experimenting and sharing results. In our case, for example, we still had a lot of heat coming out of the exhaust pipe instead of being stored in the mass heater, so we exposed some of the pipe under the bench to get more convection heat into the building. We also left the barrel exposed so the heat came out quicker into the room, rather than into the mass.

Building this rocket stove was a great journey and we learnt a lot about fire that we´d never considered before. However I think the most wonderful thing about building this rocket stove was watching its evolution into something that wrapped its way organically along one wall of our tiny house, free-forming as we sculpted it into first a simple seat, then a bench large enough to be a bed for a guest to sleep on (if it doesn't get too warm) and finally into a beautiful and efficient burning salmon-coloured dragon that is a central part of the small living space with many uses: a hearth, a place of rest, somewhere to put a cup of tea and read a book or just a place to pause for a moment.

If you want to build a similar stove, get the materials and do it. There are a number of online forums where you can post your questions. And you can always contact me on pepodib@hotmail.com

Happy burning!

Shared by Jose Dib (Pepo)

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LET'S SHARE OUR NEWS

TRY NEW TASTES FOR SALT WITH YOUR FAVORITE HERBS AND SPICES

Aromatic salt is simply coarse sea salt with a mix of herbs and/or spices. It smells and tastes great so I can use it to season any dish or salad. Lately, I have been doing my own mixes and giving away samples to friends - the results were very encouraging.

You can find aromatic salt mixes in some local stores. However, the choices are usually limited or adapted to specific cuisines (Asian or Indian) - not everyday food in Lebanon.

A few years ago I discovered the locally-made organic mix, "Fleur de sel with herbs" produced by the **Adonis Valley** brand. The mix contains herbs that grow in Lebanon or are widely used in our food: thyme, sage, oregano, sumac and laurel. It can be used as seasoning for salads and steamed vegetables, eggs and omelets, pasta, or any kind of meat.

Adonis Valley's products are very good. My only complaint was that their salt mix contains some large salt grains. It's difficult to spread it evenly, and you end up with hard crunchy bits under your teeth. Also I was sure that a homemade version would cost less.

The ingredients were simple. I picked leaves from the laurel tree in my garden, thyme flowers from an orchard in Sidon and sage from a friend's village in Jezzine (Saidoun). Another friend got me natural sumac from a village in the South. My cousin sent me oregano from her village near Chalkidiki (Greece) since it is not grown in large quantities locally. I only had to buy 1 kg of unrefined rock salt for $1.

All I had to do was grind all the ingredients together to a soft grainy texture. A wood mortar and pestle (similar to the one we use for grinding garlic to a cream) could work, but the hard sharp edges of salt crystals would put dents in the wood and damage it. An electric mixer would sustain even more damage. A stone or ceramic mortar and pestle are the best options (I opted for ceramic).

After several tries, I found this to be the best way: First, grind the salt, filling the mortar to a thickness between 0.5 and 1 cm maximum at a time (you risk having salt bounce outside the mortar if you have too much). When you have enough, grind the herbs (except the laurel) the same way. Finally, mix everything and add 1 or 2 whole dry laurel leaves. The final product can be kept in a jar or a salt mill (if you want an even finer texture).

There are no exact measures for this; use as much quantities of herbs as you like, in different ratios. You can add, remove, or replace ingredients as you like. I added rosemary leaves I picked in Saidoun too. You can add dry chili, paprika, cinnamon, cumin, pepper, etc. it's up to you.

Attention: Aromatic salt is not the same as seasoned salt, which is made from table salt, processed spices and sometimes monosodium glutamate (MSG).
*Contrary to sea or rock salt, table salt is highly refined and contains additives to prevent clumping, as well as iodine. Although medical websites say iodized salt is good for the thyroid gland, too much of it can lead to autoimmune thyroid disease and hypothyroidism. The American Thyroid Association lists other natural sources of iodine: cheese, cow milk, eggs, yogurt and frozen yogurt, saltwater fish, seaweed, shellfish, soy milk, soy sauce.

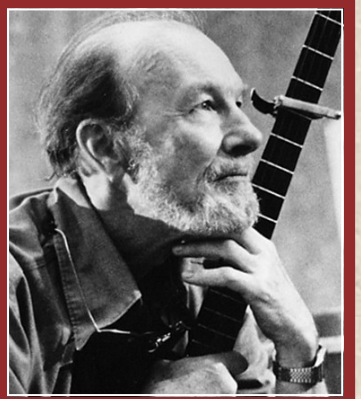
Shared by Alexis Baghdadi

A THOUGHT TO SHARE ...

"I want to turn the clock back to when people lived in small villages and took care of each other."

"Participation—That's what's gonna save the human race."

–Pete Seeger (1919-2014)



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