

CreaVista SymbIOasis ElemenTerraPeace – Seminars that make you glad... Bio- Gas Workshop, DIY April 22-24, 2022

How To Turn Shit Into Gold...



Building a simple Bio-Gas Plant (IBC System), with Shanti. Following instructions by Martin Funk right: fermenter in IBC tank (used) with filler neck (orange), gas tap (hose connection) and distributor, as well as overflow for fertilizer broth (left).

left: gas storage, two IBC tanks hold gas under slight, self-regulated pressure.

If you understand what you are doing, you can create really good things!

Bio-Gas (Methane)

... widely known as a by-product of cow manure. *Bio-Gas* is produced in the stomach of all ruminants as a result of their anaerobic digestion, i.e. in the absence of Oxygen. Cow-, sheep-, and goat-farts are almost pure methane. In that manure, most of the energy has already been used up, only a remainder of 5-10% remains. Methane, CH₄, burns to form water vapor and some carbon dioxide, CO₂! Burning means energy- release...! ... out of kitchen- and garden- waste, combined with human feces, you can produce real, pure **Bio-Gas** much



easier and richer. Plants store solar energy in the form of carbon compounds, which are released in the Fermenter by the oldest bacteria in the history of the earth in a decomposition process under water.

However, from the manure we need the methane bacteria, but this is only needed once at launch. Just 24 hours after completing our first plant here at Lake Orta, we received this beautiful blue flame of pure methane...

Small is beautiful...

...the current, worldwide energy crisis is not only a major problem for economy, transport and culture, but has also a massive impact on every private, domestic life. With the creation of a small energy and mass circuit, as this B-IBC-System enables, you can become largely energy-resilient and become aware of your personal responsibility for your carbon footprint. **Amazingly quick to build, outrageously inexpensive and functional for many years to come.**



Picture above: Bio-Gas plant by Martin Funk, at his home in Tamera

right: Fermenter, with a warming jacket made of straw and clay. Plaster: waterproof clay-lime mixture.

left: gas storage, two IBC tanks hold gas under slight, self-regulated pressure, elegant fabric covering, self-made

Construction Time: Two Days

Now at Campus CreaVista you can learn how to build your own biogas IBC system for your home, garden, or small farm! With the gas you can cook, heat water, run engines. Easy to use, cheap to buy, extremely useful, therefore easy to understand and an enrichment for a sustainable life. Such a biogas plant is less a technical device and more a living being! Continuous, daily feeding guarantees continuous, daily yield of gas. (You will also receive precise instructions for use from us for optimized operation)



We feed the cow... the garden... and our Green Heart

In addition to the desirable generation of heat energy - directly from the green environment - a wonderful liquid fertilizer is produced. If you want, you can process it through composting or Terra-Preta production* to improve soil fertility. In this way you recover all minerals, nitrogen compounds, phosphorus, manganese etc.



and all trace elements from the fermented organic material and return them to the garden soil. The converted carbon (CO²) is fed back to the plants via the air. This creates a permanent cycle, matching the systemic idea of your small Permaculture!

Technical overview:

The material for this system costs around €300 to €400. The biggest items are the tanks: €50 to €80 each, if you



can get them cheaper used, the whole thing is reduced to around €200. The right place for the system will be sought and discussed during the workshop in order to get an insight into most of the advantages and disadvantages.

The material for a digester (= fermenter) will be provided for the workshop; this will be installed at the Portowaldo farm. Tools are available. There might also be the possibility of building a second digester at the same time

if the material is provided by the participant, who can then easily take it home in a trailer or small truck.

Place: Portowaldo, Gorzegno, Valle Bormida, Piedmont, Italy

Time: Fri. 22 to Sun. 24 April, 2022

Contact - Registration: Campus CreaVista: helen.schulz@creavista.org

Compensation: between €60 and €120, follow your heart and feed our project support box

Eating: cooking together; **Allocation:** €12/day for high-quality organic food, accommodation: You can sleep in your own tent (€15) or book a bed (€20/night).

The ArtIBC Biogas Project is a design by SOLAR CITIES <http://www.solarcities.eu/>

more links: <https://www.biogascentral.net/digester/983>

Welcome... to the EAST - WEST - AXIS

Your host and organizational team:

Marlene, Shanti, Helen